

Flight, April 20, 1912.

FLIGHT

First Aero Weekly in the World.

A Journal devoted to the Interests, Practice, and Progress of Aerial Locomotion and Transport.

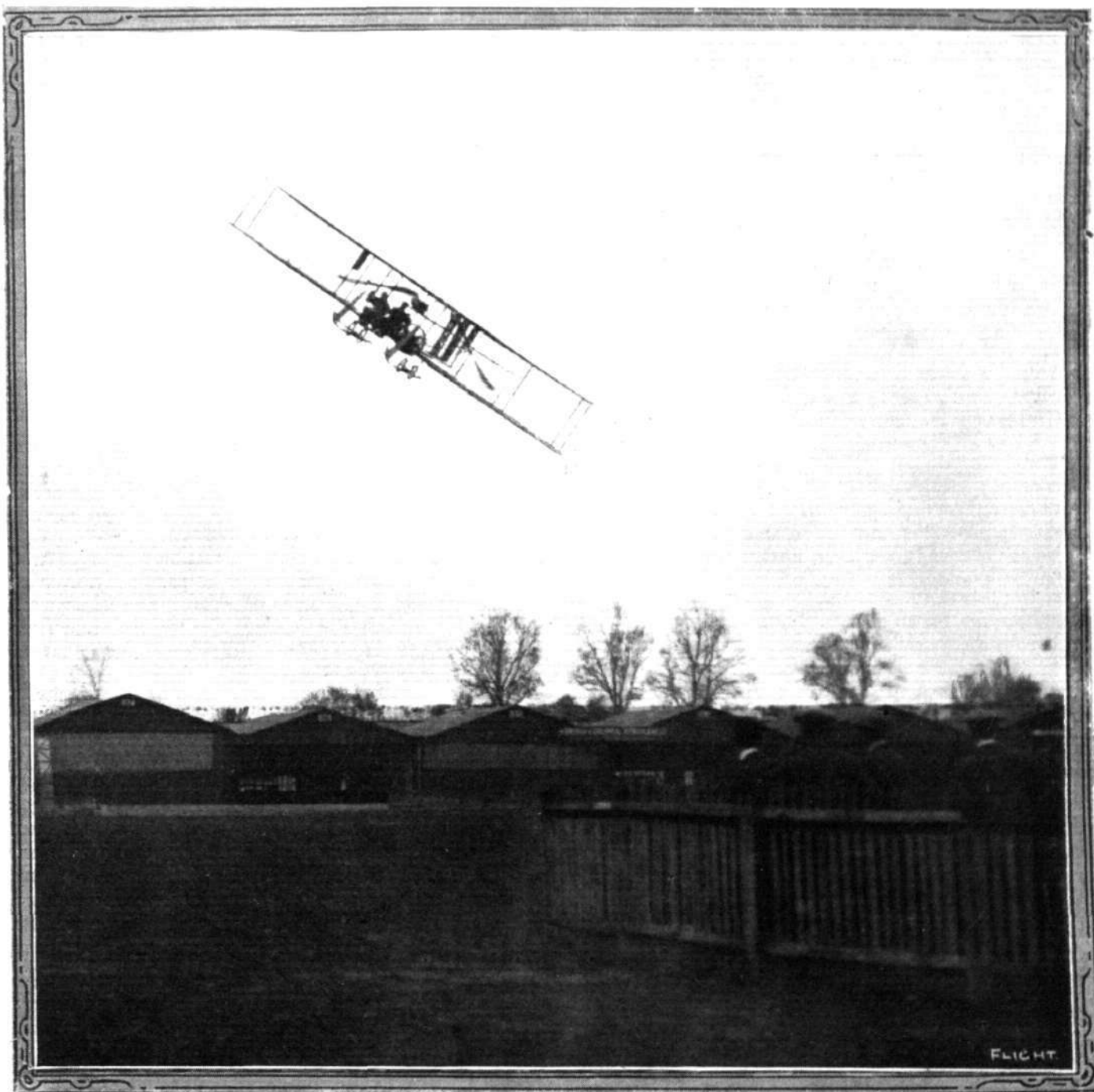
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FLYING AT BROOKLANDS.—Raynham, with a passenger, making a fine turn on the Burgess-Wright biplane on Sunday at Brooklands.

EDITORIAL COMMENT.

The Government's Aerial Defence Scheme.

Hard on the heels of our leader in last week's issue of *FLIGHT*, in which we attempted to set forth the Government's scheme of aerial defence as we conceived it to have taken shape in the minds of the advisers of the War Office and the manner of its working, came the issue of the official White Paper in which the intentions of those who are responsible for our defences are made quite clear. Along its main lines the Government's scheme follows absolutely our own exposition made for the benefit of the critics who have strained every nerve and every argument to confound Col. Seely and his advisers and, incidentally and collaterally, to mislead the public to whom their criticisms have been addressed. Let us hasten to say in this connection that we do not for a moment think that there has been deliberate malice in the criticisms to which we have referred—all that has been present, we are convinced, has been a want of proper information and an enormous excess of zeal. Now that we have before us more clearly what the Government intends to do we may hear less of the kind of thing with which the columns of certain of our lay contemporaries have been flooded of late. Criticism is an excellent thing in its way—in fact, it is inconceivable that we can have progress without it—but to be of any value at all it must be allied to something like accurate information of things as they are, and at least some sense of proportion.

In the main, the statements contained in the White Paper under notice may be passed as satisfactory, though in certain of their details we could wish that more definite information had been afforded. The "General Principles" are excellent in their wording and in the deductions which have prompted them. Indeed, they could hardly be otherwise than they are unless the Government had been absolutely blind to the progress that has been made in aviation. But "General Principles" do not constitute a complete scheme, and it is quite possible to hold the most orthodox of views, but to carry them into practical effect in a most heterodox manner, and it is with the scheme itself rather than with the principles underlying it that the public is most concerned.

In the "Outlines of the Scheme" are set forth the ways and means by which those principles are to be applied. Briefly, the Royal Flying Corps is to supply the necessary personnel for a naval and military wing, to be maintained at the expense of, and to be administered by, the Admiralty and the War Office respectively; also, it will provide personnel for a central flying school and for a reserve on as large a scale as may be found possible. The Central School is to be maintained at the joint expense of the Admiralty and the War Office and after graduating there, pilots will be detailed to the naval establishment at Eastchurch or to one of the military squadrons for a special course of further training.

The duties and scope of the Royal Aircraft Factory are clearly defined and are shown to be precisely as we detailed last week. Again, emphasis is laid on the fact that it is in no sense to be a rival establishment to the private constructors, its activities being confined to the training of officers and men in higher mechanics; the reconstruction of aeroplanes; repair work for the Royal Flying Corps; tests with British and foreign engines and aeroplanes, and experimental work generally. That, we think, should finally dispose of the repeated allegations

which have been made to the effect that it was the Government's intention to build its own aircraft at the factory.

So far all seems quite satisfactory and as we would have it. But when we come to that portion of the White Paper which deals with "Aid to Private Enterprise," we confess that there seems to be just that amount of ambiguity about the Government's proposals which gives rise to a feeling that even yet it is not realised how necessary it is that the industry should be generously encouraged until such time as it is able to stand on its own feet. For example, the Paper tells us that entry to either the naval or the military wing of the Royal Flying Corps "should ultimately be confined to those who have qualified at the Central Flying School." We should like to know exactly what this means. Does it convey that presently entry will only be for those who have learnt to fly at the Central School and passed through their whole aviation course there, or does it mean that officers may be initially trained at private schools, but must pass a qualifying examination at headquarters? If the latter, then we can endorse the policy to its end, but if the former is meant then we fail to appreciate the method of encouraging private enterprise which the Government sees fit to adopt. Again, we read that "for the present" military officers and civilians . . . should first obtain their R.Ae.C. certificate, and on being accepted as members of the corps will receive the sum of £75.

We cannot see here much encouragement to either officer or civilian to enter blindly on an expensive qualifying course which may easily lead nowhere, and further, this does not necessarily imply either aid or encouragement—even "for the present"—to those who have invested capital and work in the organisation of flying schools which are as much in part of the industry as the actual building of machines. Then it is proposed that a *small* rent be paid to the principal aerodromes for landing rights and for the use of sheds by members of the corps engaged in cross-country flights. Why the word "small"? Surely we do not need to treat the subject from the standpoint of parsimony, even in such details as this. Let the Government look things squarely in the face, admit frankly that we have fallen woefully behind in the air-race, and realise at once that the only way to overtake things is to treat those who are willing and eager to assist with something like generosity.

The one vital essential which the Paper does not touch upon is that of finance. It is obvious that the scheme here outlined is much more ambitious than that forecasted by Col. Seely in his speech introducing the Army Estimates and, therefore, cannot be paid for out of the sums which the House was asked to vote on account of aviation. From where is the money to come, has been asked? A paper scheme of aerial defence may look very well but it will not help us in the day of need, say the querists. True, but we have every confidence that the needful money *will* be forthcoming. There is that matter of the Budget surplus which may be held in the mind's eye. This, it is known, is tentatively earmarked for defence purposes, and what is more natural than that a portion of it should be brought out for the service of the Royal Flying Corps and its organisation? But whether the funds come out of this surplus or not, they will be forthcoming.

FLIGHT PIONEERS.



LIEUT. A. M. LONGMORE, R.N.,

Winner of the Mortimer Singer Navy Aviation Prize by his 172-miles flight at Eastchurch on March 11th, on a 70-h.p. Gnome-engined Short tractor biplane.

Peking to Paris.

The daring project of our French contemporary, *Le Matin*, for an aeroplane race from Peking to Paris has now taken definite shape. Without going into the question of the physical possibility of such a race being completed, further than to say that we see no reason at all why it should not be, provided the organisation is adequate, the most marvellous thing about it all is that the announcement of *Le Matin's* intention has been taken quite as a matter of course by the world at large. The man in the street sees nothing incongruous in a flying project even of such magnitude as an aerial journey across two continents. And yet it is not three years since the bare possibility of a flight from London to Manchester was literally laughed to scorn! In the light of such rapid developments as are implied in the suggestion that it is possible to contemplate such a race, it seems simply futile to insist upon the marvellous strides that the science of aviation has made within the comparatively short time that has elapsed since the first practical flight was made.

Mr. Grahame-White and the Royal Flying Corps.

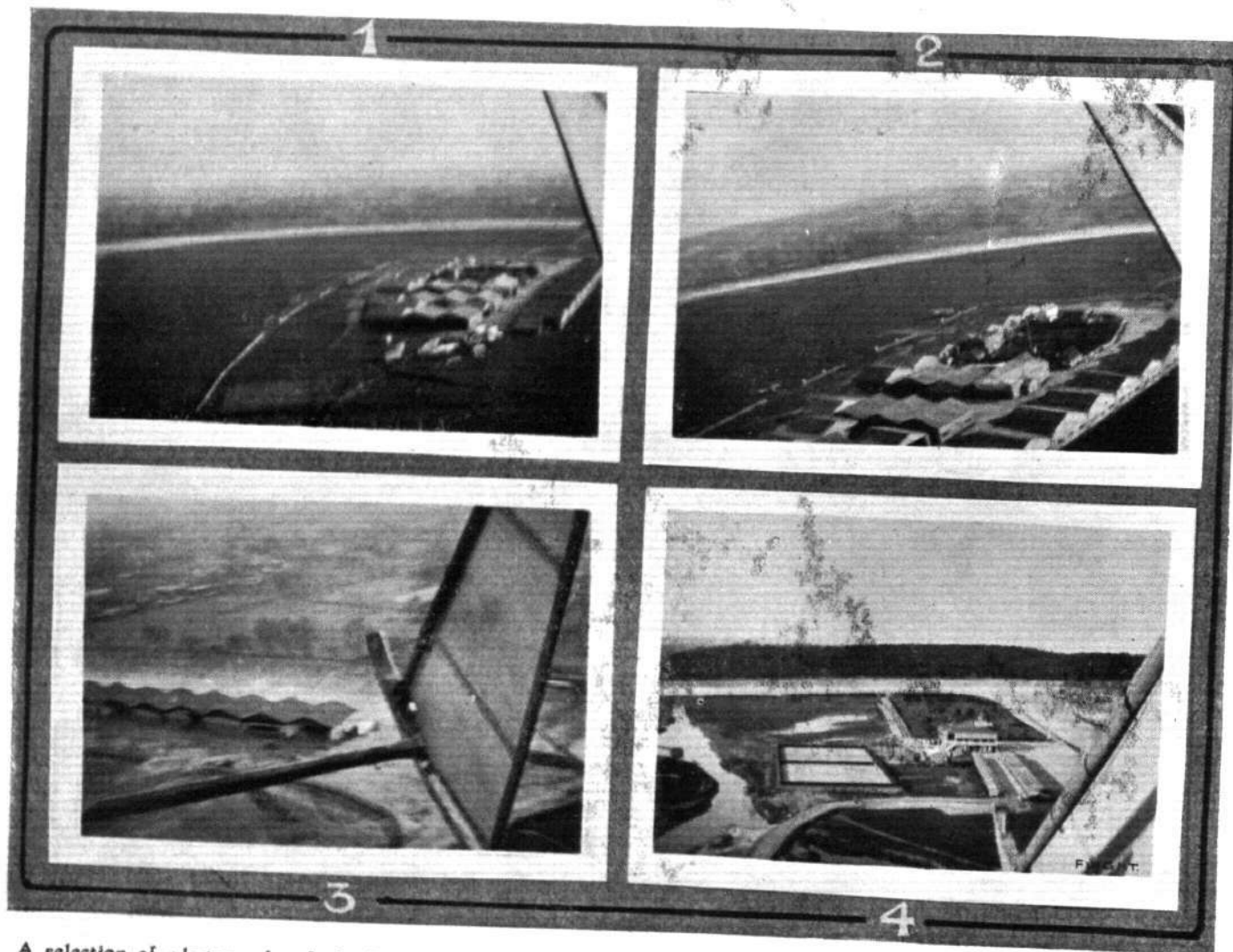
We note and approve the public spirit manifested by Mr. Grahame-White in telegraphing immediately on the issue of the War Office memorandum on aerial defence to Lord Haldane, offering to join the Royal Flying Corps or to serve in any capacity in which his skill and experience as an aviator may be of

service. To him is due the credit of having been the first to place himself at the country's disposal under the new scheme, but we imagine that many of our enthusiastic pilots will follow his excellent example. Which is still another argument for the generous treatment by the Government of those who are willing and eager to risk life and limb in the most dangerous of all military service.

Delivery by Air.

A significant sign of the times is conveyed by the manner in which the new naval Deperdussin monoplane was delivered to the Admiralty authorities a week ago. Leaving Paris at 7 a.m. M. Prevost, accompanied by Mr. Lawrence Santoni flew to within twelve miles of Calais where they descended to change a sparking-plug, restarted and went on to the town named. A stop was made for lunch, the journey across Channel being resumed later, and without further incident Eastchurch was reached $5\frac{3}{4}$ hours after leaving Paris. The same evening Lieut. Longmore made an extended flight taking Lieut. Grey with him as a passenger.

We seem to have reached a stage of development at which the aeroplane is practically as reliable as the more orthodox methods of locomotion. In fact, such flights as this, have become so commonplace as to scarcely excite remark nowadays. But what an argument this sort of flying furnishes for straining all our resources to overtake the ground we have lost in comparison with our neighbours across the narrow seas.



A selection of photographs of the Brooklands flight colony secured by Mr. P. Raynham, piloting a Burgess-Wright biplane.—1. The sheds as seen from above the sewage farm. 2. As they appear from above the railway straight. 3. The sheds against the Byfleet banking. 4. The Club House, paddock, and tennis courts.

AEROPLANE DELIVERY TO NAVY BY AIR.

FIRST PASSENGER FLIGHT FROM PARIS TO EASTCHURCH.

PARIS TO ENGLAND IN ONE DAY.

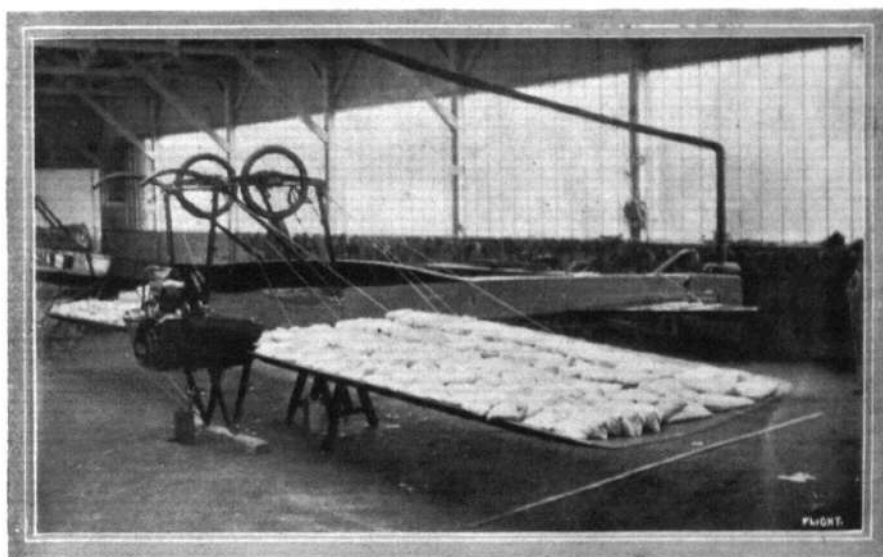
It was a happy thought that prompted Mr. Lawrence Santoni, Manager of the British Deperdussin Aeroplane Co., Ltd., to decide to deliver the new 70-h.p. two-seater Gnome-Deperdussin destined for the Navy, by way of the air. The machine itself was the first to be turned out from the Deperdussin works, of a batch of ten that were being constructed to special design for the French Government. Our Admiralty must indeed be congratulated on obtaining the most up-to-date type of this make of monoplane that could be secured. The fact that the machine should yet be at the Deperdussin works in Paris receiving its finishing touches on the Friday morning of last week, be tested for the first time in the air at four o'clock on the same day, be safely delivered to the British Admiralty *via* the air soon after mid-day the following day, and two hours afterwards should be flying a thousand feet up under the sole control of Lieut. Longmore, who had never previously flown this type of machine, is a performance of which both the English and French Deperdussin firms in England have a just right to be proud. As an illustration of the practicability of the aeroplane at the present day it could scarcely be bettered.

Following the disclosures that have recently been made regarding the trussing of monoplane wings, particularly relating to the upper guy-wires, special attention has been paid to this most important point, and although in the past Deperdussin machines have never exhibited weakness in their upper bracing, yet, to completely comply with the edict lately issued by the French military authorities, this section of the machine has been still further strengthened.

On Thursday of last week Lieut. Longmore, one of our most excellent Navy pilots, was sent by the Admiralty to witness the resistance tests on the wings of this particular machine, as required by the naval authorities, they being loaded up with 2,500 lbs. of sand, as depicted in one of our photographs. Throughout the following morning the machine was yet at the Deperdussin factory receiving its final finish to the paint-work before being dispatched to Issy les Moulineaux later on in the day to be tested in the air. Prevost carried out this operation. He took the machine out soon after 4 o'clock, in spite of a wind so strong as to prevent any of the other aviators on the ground from bringing their machines from their sheds. After a flight of about 10 minutes' duration, at about a 1,000 ft. level, he descended to take up Mr. Santoni, and the two flew away at a

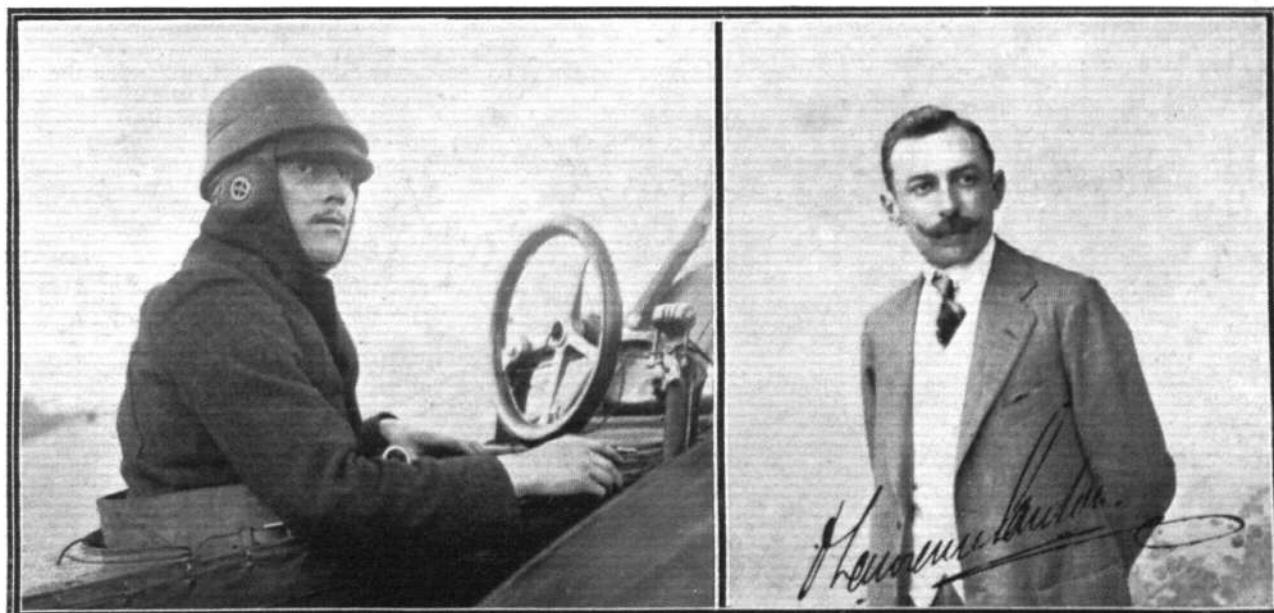
height of 2,000 ft. over Paris, circling the Eiffel Tower, and returning down wind at a terrific speed to the testing ground. M. Armand Deperdussin, his chief engineers, MM. Bechereau and Papa, and Capt. Ludmann, the Breguet pilot, as representative of the French War Office, were present to witness this splendid exhibition.

It was the machine's third trip in the air, when on Saturday morning, at 7 o'clock, it rose from the Issy grounds, with Prevost



The identical 70-h.p. Deperdussin two-seated monoplane on which M. Prevost and Mr. Lawrence Santoni flew from Issy les Moulineaux to Eastchurch on Saturday the 13th, being tested on Thursday evening, prior to leaving the works, with a load of 2,500 lbs. of sand, in the presence of Lieut. Longmore, as the representative of the British Admiralty.

at the control and Mr. Santoni in the passenger's seat. Their destination was known by none on the ground with the exception of two or three friends, although from the fact that both wore life-saving jackets it must have been generally surmised that it was a cross-sea trip that was proposed. There was a strong northerly wind blowing, and over Paris was a fairly dense mist, which disappeared as the open country was reached. Amiens, 80 miles from Paris, was passed at 8.20, at an altitude of over 2,200 feet. It was Prevost's original intention to follow the route to Amiens,



M. Prevost, on the left, and his passenger, Mr. D. Lawrence Santoni, Manager of the British Deperdussin Aeroplane Syndicate, who, on Saturday of last week, flew from Issy les Moulineaux to Eastchurch on a 70-h.p. Gnome-Deperdussin, delivering the machine to the Naval Aviation Section there.

on to Abbeville, to strike the coast near Berck and to follow it to Calais, but as slight fog was experienced he thought it advisable to keep away from the coast line, and to maintain a course direct over land from Amiens to Calais. At Arrhes, ten miles from Calais, a descent was made at 9.45, to clean a sparking plug. So cold had the trip been that both were numbed; Prevost was bleeding from the lips, and Mr. Santoni's moustache had frozen stiff. The descent was made in a corn-patch, scarcely ten yards wide. Crowds of peasants gathered round, and after everything had been put in order, some of the local talent was made use of to cling on to the tail of the machine, Mr. Santoni swung the propeller, quickly clambered into his seat, and a re-start was made at 10.45. A short circle, meanwhile rising to about 1,000 ft., and the pair set out for Calais, where they landed at eleven o'clock. Prevost had arranged for his mechanic to meet him at the old European circuit aerodrome, but things had been so changed since, all the sheds having been taken down and the ground divided into various portions, that he could not recognise it. After circling for some time in a vain endeavour to discover the missing aerodrome, a descent was made in a very narrow stretch of ground.

At Calais, M. Prevost and Mr. Santoni replenished their own vitality and that of the machine with food and petrol respectively. In spite of a warning of a thick mist in the Channel, they decided to proceed, trusting to their Monoprop compass to lead them aright, and possibly to be guided by catching a sight of the midday boat crossing Dover to Calais. A start was made at 12 o'clock, and by the time the coast was reached the machine had attained a height of 2,000 ft., an altitude which it maintained throughout its trip over the water. The wind, which had caused some small amount of discomfort overland, entirely disappeared over the sea, and the machine maintained a plumb steady course. When about

half-way across the Channel, closed in all around by a wall of white fog, and when Mr. Santoni was probably wondering if the course were true and feeling anxious for the safe delivery of his machine, a white light, as if reflected from a mirror, appeared below and in front of them. It proved to be the Channel boat of which they had anticipated catching sight. Maintaining a course slightly to the east of its wake, they regained the coast over Deal, sighting Dover Harbour away to the left. The land regained, the wind was again felt, and the type of English wind was of a very noticeably different character from that encountered over French soil. Passing Canterbury to their left, they caught sight of Sheppey island and were soon heading over the strip of water that divides it from the mainland. Here, as some of our Eastchurch pilots may well have expected, they came across a most malignant type of air-pocket, which caused the machine to drop with startling suddenness, and to unseat both pilot and passenger. They landed before their shed at 12.45. Commander Samson, Lieuts. Longmore and Gregory, Mr. Frank McClean and the rest of the Eastchurch pilots, with Mr. Harold Perrin, were there to greet them, and were no doubt surprised to find who the occupants were and from where they had come. Especially so was Lieut. Longmore, who had a difficulty in crediting that the machine he had seen descend was the identical one on which he had seen wing tests carried out in Paris two days previously. In Paris, witnessing the tests, he had anxiously enquired when he would get his machine delivered, and was rather uneasy at not seeing a packing case ready to receive it. Within two hours of the voyagers' arrival he himself was flying the machine over the Royal Aero Club's flying grounds, taking up with him Lieut. Spencer Grey as passenger, and afterwards flying solos at a height of 3,500 feet for nearly an hour.

THE AMERICAN FLIGHT CIRCUIT.

(OFFICIALLY COMMUNICATED.)

THE Aero Club of America, with the co-operation of the Aero Clubs of Illinois, Michigan, Milwaukee, Kansas City, St. Louis, Indiana, Cincinnati, Ohio, is organising an aeroplane circuit of 1,810 miles, which will be held in the month of August, and will be known as the Great American Circuit.

Chicago will be the starting and finishing point of the circuit. The route proposed is Chicago, Milwaukee, Cedar Rapids, Des Moines, Omaha, St. Joseph, Kansas City, Jefferson City, St. Louis, Charleston, Indianapolis, Cincinnati, Columbus, Cleveland, Toledo, Detroit, Chicago. Stops will be made at each city, where there will be a "control" or station, and possibly at other cities situated along the route. The circuit is to be open to licensed pilots of all nationalities, who will be free from injunction under the Wright patents.

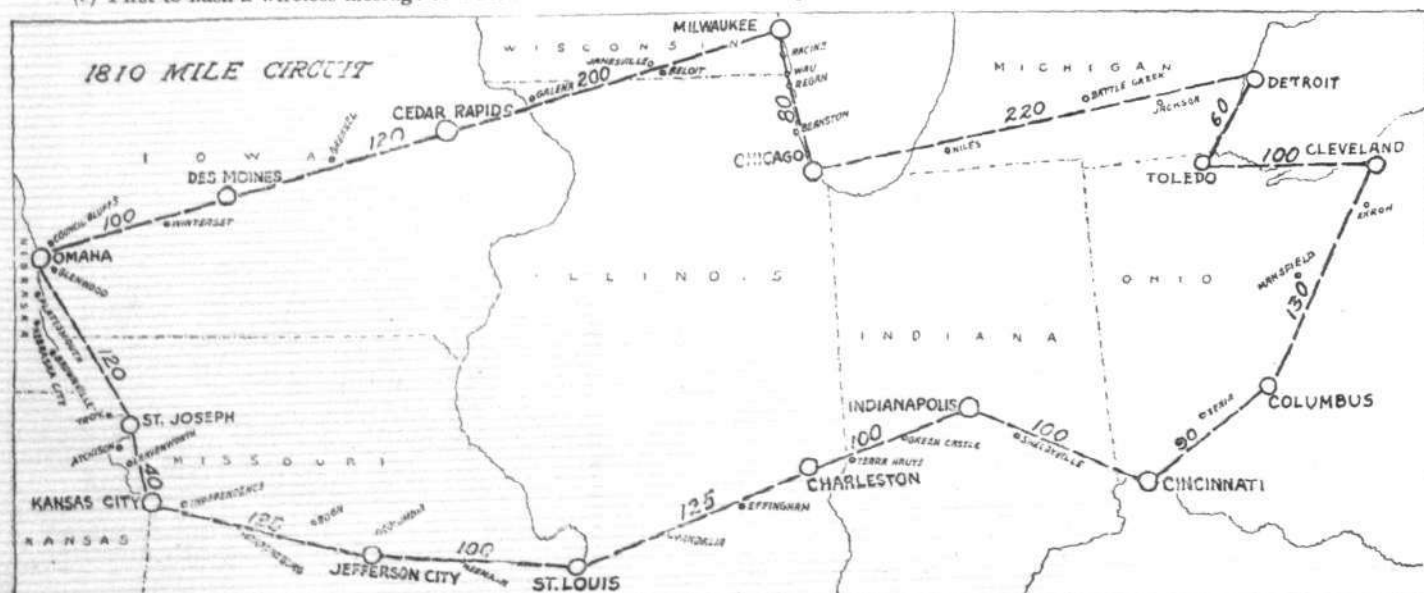
The prizes will probably amount to \$100,000, and will include a Grand Prize of \$25,000, second prize of \$5,000, third prize of \$2,500. Among the prizes to be given are:—

Prizes for first and second machines to reach each control.
Special prize for American-built and flown machines first to arrive.
Special prizes for:—

- (a) Least horse-power to complete course.
- (b) Passenger-carrying.
- (c) First to flash a wireless message to a control.

- (c-1) Greatest number of wireless messages delivered.
- (d) Best maps made *en route*, and description of conditions, &c.
- (e) First aeroplane fitted with stabilizer to arrive.
- (f) Most completely equipped machine.

This circuit should thus be greater than any of the circuits held last year in Europe, and will include features never before included in aerial contests. All the circuits last year were essentially races for speed between two points, and the prize went to the fastest. No effort was made to bring out the qualities of aeroplane other than speed. Thus while the splendid performances of Beaumont, Vedrines, Garros and other clever airmen created a great deal of enthusiasm and interest there was really little of practical value brought out that the world did not know or that would bring the aeroplane nearer to the average man for general use. In the great American circuit every inducement is given to bring out and demonstrate the practical side of aviation. Using less horse power, carrying passengers over a long distance, using wireless telegraphy for communicating from aeroplanes, using automatic stabilizers and less human element, and having aeroplanes fitted with scientific instruments for travel and devices to promote comfort—these are all practical features which, when applied, will make the aeroplane cheaper, safer, and a vehicle of service as well as pleasure.



THE GREAT AMERICAN CIRCUIT.—Official map of the selected course.

MISS QUIMBY FLIES THE CHANNEL.

ALTHOUGH Miss Harriet Quimby has made an enviable reputation for herself as a capable pilot in America, her native country, she has not been very well-known on this side of the Atlantic, and no doubt few of our readers who read the announcement in FLIGHT a week or so back that she was coming to Europe, looked for her so soon to make her mark by crossing the Channel. Contrary to what one would expect, the feat was carried through without any fuss or elaborate preparations, and only a few friends, including Mr. Norbet

left Deal, rising by a wide circle and steering a course, by the aid of the compass, for Cape Grisnez. Dover Castle was passed at a height of 1,500 feet, and by the time the machine was over the sea, it was at an altitude of about 2,000 feet. Guided solely by compass, Miss Quimby arrived above the Grisnez Lighthouse a little under an hour later, and making her way towards Boulogne she came down at Equihen by a spiral *vol plane* not far from the Blériot sheds.



Miss Harriet Quimby, who on Tuesday last, on a Blériot monoplane, flew the Channel from Dover to Equihen—the first time the feat has ever been accomplished by a lady pilot unaccompanied.

Chereau and his wife and Mrs. Griffith, an American friend, knew that the attempt was being made and were present at the start. Miss Quimby had ordered a 50-h.p. Gnome-Blériot, which arrived from France on Saturday, and was tested on Sunday by Mr. Hamel. On Tuesday morning, as previously arranged, after Mr. Hamel had taken the machine for a preliminary trial flight, Miss Quimby, who had been staying at Dover under the name of Miss Craig, took her place in the pilot's seat, and at 5.38



Royal Flying Corps (Military Wing).

IN connection with the memorandum on Naval and Military aviation, which we reproduce elsewhere, a special Army order has been issued dealing with the Royal Flying Corps (Military Wing). This elaborates the information given in the memorandum as to the method of applying for admission to the Corps, the terms of service, &c. It also states that the grades of officers will be Commanding Officer, Squadron Commander, Flight Commander and Flying Officer, and officers holding either of the first three appointments will, if of lower rank, be granted temporary rank of Lieut.-Col., Major and Captain respectively while holding the appointments. The order also states that the Air Battalion will cease to exist as a unit of the Corps of Royal Engineers on May 13th next. Appendices to the order explain in detail the peace and war establishment of an Aeroplane Squadron from which it appears that the Headquarters Staff will consist of a Commander, six officer flyers, (to act as reliefs or observers), two warrant officers and twelve air mechanics, while for each of the three flights making up the squadron, there will be

To Miss Quimby, therefore, belongs the honour of being the first of the fair sex to make the journey, unaccompanied, across the Channel on an aeroplane; and, appropriately enough, as the first crossing of an aeroplane by a "mere man" was on a Blériot machine, her mount was of that type. Miss Trehawke Davies, it will be remembered, was the first lady to cross the Channel in an aeroplane, but she was a passenger with Mr. Hamel on his Blériot monoplane.



four officer flyers, seven sergeants, and thirty-two air mechanics making a total of 150 officers and men for the squadron. For each squadron there will also be thirty-seven motor vehicles, including cycles, cars, luries, repair vans, &c.

The Royal Flying School.

IN reply to questions in the House of Commons on Tuesday last, Col. Seely stated that work had been commenced on the buildings of the Central Flying School, but the date upon which it will be opened cannot yet be stated. At present 16 aeroplanes are in possession of the War Department, and there are 24 officers employed in the airship and aeroplane work. It is intended that detachments of the Royal Flying Corps should take part this year in Army manoeuvres.

The Upavon estate was chosen as a flying school upon the recommendation of a committee containing a flying expert and also of Brigadier-General Henderson and Mr. Mervyn O'Gorman.

THE ROYAL FLYING CORPS.

THE following memorandum issued on Friday last from the War Office shows further details of the scheme of naval and military aviation which, in the debate on Army Estimates, on the 4th instant, Colonel Seely informed the House of Commons had been adopted by the Government, on the recommendation of the Committee which, under his chairmanship, had been commissioned to consider and report on the whole subject.

This memorandum omits all reference to the important subjects of emoluments and similar financial considerations, in regard to which the details have not been finally decided.

Considerations of General Policy.

The Government have been impressed by the evidence which has been placed before them regarding the state of Aerial Navigation in this country, compared with the progress made by other great naval and military Powers.

The necessity for an efficient aeronautical service in this country is not less urgent than in the case of the other Powers. The efficiency of the aeroplane for purposes of military reconnaissance has been proved both in foreign manoeuvres and in actual warfare in Tripoli, and without doubt aeroplanes have now become an important adjunct to the equipment of an army in the field.

The strategical and tactical uses of the aeroplane as an adjunct to the operations of a fleet cannot yet be forecasted with equal certainty, but it is clear that this country cannot afford to incur the risk of dropping behind other nations in this matter, and that every facility must be given for experiment and progress.

There are admittedly advantages in a policy of postponing the development of aeroplanes for naval and military purposes, and of leaving the pioneer work to private enterprise and to foreign nations, but it is clear that aeroplanes have now to a great extent passed out of the experimental stage as regards their employment in warfare, and an active and progressive policy has therefore become imperatively urgent.

General Principles.—In formulating the policy to be adopted the Government have been guided by the following principles.—

(a) The organization adopted should provide establishments adequate for our present requirements, but must be sufficiently elastic to permit of considerable expansion in the future.

(b) The organization should be capable of absorbing and utilizing the whole of the aeronautical resources of the country.

(c) While it is admitted that the needs of the Navy and Army differ, and that each requires technical development peculiar to sea and land warfare respectively, the foundation of the requirements of each service is identical, viz., an adequate number of efficient flying men. Hence, though each service requires an establishment suitable to its own special needs, the aerial branch of one service should be regarded as a reserve to the aerial branch of the other. Thus in a purely naval war the whole of the Royal Flying Corps should be available for the Navy, and in a purely land war the whole corps should be available for the Army.

(d) It is important to give every possible encouragement to the development of private enterprise in aviation, and every inducement should be offered to flying men who do not belong to the Navy and Army to join the Royal Flying Corps. Proposals in this respect, and with regard to encouragement for existing aerodromes will be found in this paper.

(e) It is essential that all combatant officers in the Royal Flying Corps should be practical flying men.

(f) Experimental work in all branches of the Royal Flying Corps should be co-ordinated.

Outlines of the Scheme.—The general outlines of the scheme proposed by the Government are as follows:—

The British aeronautical service is to be regarded as one, and by special permission of His Majesty the King is to be designated "The Royal Flying Corps."

The Royal Flying Corps will supply the necessary personnel for a Naval and a Military Wing, to be maintained at the expense of, and to be administered by, the Admiralty and the War Office respectively. The corps will also provide the necessary personnel for a Central Flying School, and for a reserve on as large a scale as may be found possible.

This school is to be established for the training of flying men on Salisbury Plain, being maintained at the joint expense of the Admiralty and War Office, and being administered by the War Office. After graduating at the Flying School, flying men will become members of the Royal Flying Corps, and will then be detailed to join either the Naval Flying School at Eastchurch for a special course of naval aviation or one of the Military Aeroplane Squadrons for a special course of military aviation, or to pass into the Reserve of the Royal Flying Corps.

The Naval Wing of the Royal Flying Corps, entry to which should ultimately only be obtainable by qualifying at the Central Flying School, will for the present have its headquarters at the Naval Flying School at Eastchurch. It is impossible to forecast what its ultimate organization and development will be, as this depends to a great extent upon the result of experiments, which are about to be commenced, with hydro-aeroplanes.

The Military Wing of the Royal Flying Corps should consist of a number of squadrons, entry to which should ultimately be confined to those who have qualified at the Central Flying School. Eight of these Squadrons are required for use in connection with the Expeditionary Force.*

It is desirable that at present no establishment should be fixed for the Royal Flying Corps as a whole, but only for the Naval and Military Wings, and these provisionally with a view to future expansion. The Royal Flying Corps will be largely composed of officers and men who are not performing continuous service, and who are merely incurring an obligation and being retained on condition that they keep themselves proficient. Many of them will probably be naval and military officers performing duty with their ships or regiments, and many others will have joined on conditions of service resembling those of the Special Reserve of the Army.

The mechanical requirements of the Royal Flying Corps will be provided by the existing Army Aircraft Factory, which, with His Majesty's permission, is being renamed the "Royal Aircraft Factory." This establishment should undertake the following important duties:—The higher training of mechanics for the Royal Flying Corps and for the Central Flying School; the reconstruction of aeroplanes; repair work for the Royal Flying Corps; tests with British and foreign engines and aeroplanes of the latest design, and experimental work.

The Aeronautical Advisory Committee will continue its experimental and research work on the present lines, and it is of great importance that there should be the closest possible collaboration between the Naval and Military Wings, the Central Flying School, the Royal Aircraft Factory and the Advisory Committee. An officer from the Central Flying School and an officer from the Naval and Military Wings respectively should be added to the Advisory Committee.

The Government attach importance to the maintenance of private enterprise in the field of aeronautics in this country. The objects of this are not only to provide a reserve of flying men which may be drawn on in emergency, to stimulate invention and to keep alive public interest, but also to provide aerodromes, landing places and sheds at convenient intervals throughout the country, without which cross-country flights are almost impossible. Accordingly it is proposed that

(a) for the present military officers and civilians who are candidates for commissions in the Royal Flying Corps should first have to obtain their Royal Aero Club certificate, and on being accepted as members of the Royal Flying Corps should receive the sum of £75, and

(b) a small rent should be paid to the principal aerodromes for landing rights and for the use of sheds by members of the Royal Flying Corps engaged in cross-country flights. The French Government rightly attach importance to cross-country flights, and offer every encouragement to those engaged in military aviation and to undertake such flights.

The Government propose that a permanent consultative Committee should be appointed, to which questions in connection with flying affecting both departments should be referred by the Admiralty and War Office. This Committee should be designated the "Air Committee," and should be a permanent Sub-Committee of the Committee of Imperial Defence, and should be composed of representatives of the various departments concerned.

The Royal Flying Corps.

In dealing with the formation of the Royal Flying Corps and its reserve, some difficulty arises from the consideration that the requirements of wastage in war in this new arm are unknown quantities. No estimates can be made of first-line requirements which are not to some extent guess work. Hence it follows that the Reserve of the Royal Flying Corps should be as large as financial considerations will permit, and should be capable of expansion in case of emergency—capable, indeed, of absorbing the whole of the resources of the country in this branch of science.

Conditions of Service.—Entry to the Royal Flying Corps as officers will ultimately be confined to those who have graduated at

* Seven of these will be aeroplane squadrons, the eighth consisting of airships and kites.

the Central Flying School. Those officers will be drawn from (a) officers of all branches of the naval and military services, and (b) civilians. The rank and file will consist of warrant officers, petty officers, non-commissioned officers and men transferred from the Royal Navy or the Army, and also of men enlisted directly into the Royal Flying Corps, either on a regular or a special reserve basis.

Officers of the Navy who are selected for service with the Royal Flying Corps will, as a rule, undergo their elementary training at the Central Flying School. Officers of the Army may, when selected, be required to obtain the Royal Aero Club certificate, by private arrangement, before joining the Central Flying School. After graduating at the Central Flying School, officers will be attached, as may be necessary, to the Naval or Military Wing for further training. At the conclusion of their training they should be eligible to be appointed either (a) for continuous service in the Naval or Military Wing of the Royal Flying Corps, or (b) to the permanent staff of the Flying School, or (c) to the Royal Flying Corps Reserve.

The period of appointment in the case of officers, who elect for continuous service with the Naval or Military Wings of the Royal Flying Corps or at the Central Flying School, will normally be 4 years.

Civilian candidates for appointment to the Royal Flying Corps as officers will apply in the first instance to the Commandant of the Central Flying School, quoting the number of their Royal Aero Club certificate.

Men transferred from the Navy and Army, or enlisted from civilian sources, for continuous service should be selected by the naval or military authorities respectively, and by the Commandant of the Central Flying School. The period of enlistment suggested is 4 years, with re-engagement from year to year, or opportunity to transfer to the Reserve.

Great importance is attached to the primary condition that every member of the Royal Flying Corps shall incur a definite obligation to serve in time of war either for naval or military purposes in any part of the world.

The Royal Flying Corps, with the exception of the Naval Wing and officers and men of the Royal Navy and Royal Marines who are members of the Reserve of the Royal Flying Corps, will be under the administration of the War Office.

Conditions of Reserve Service.—The officers of the Reserve of the Royal Flying Corps should be divided into two classes; the officers of the First Reserve should be required to produce on the first day of each quarter satisfactory evidence that they have performed during the previous quarter flights amounting to an aggregate of nine hours in the air, and including one cross-country flight of not less than one hour's duration. These conditions should be subject to modification in particular cases. Flyers of the Second Reserve need not be required to carry out any flights, but should be available for service in the Royal Flying Corps in time of war.

Flyers of the First Reserve should be given facilities for their obligatory flights every quarter at one of the naval or military establishments, or if this is impossible, at a private aerodrome. An authorised rate of payment should be laid down for flights undertaken at private aerodromes.

No aeroplanes should be purchased for the Reserve of the Royal Flying Corps at the present stage, though this should not prejudice future policy on this question. For the present the Reserve should provide personnel rather than matériel.

A reserve, however, of matériel would be required in war, and for this purpose the Commandant of the Central Flying School should keep a register of privately owned aeroplanes, which might usefully be purchased for the use of the Royal Flying Corps in case of emergency.

Members of the Royal Flying Corps who own aeroplanes should be encouraged to bring these to the Central Flying School, when they undergo their training there, and to naval and military manoeuvres.

The Government believe that a considerable proportion of the qualified flying men in this country can be attracted to this Reserve, which will then be of real value, being available in any part of the world and for either service.

It is not proposed at present to fix any limit to the numbers to be entered, as the number of qualified flying men in the country is comparatively small, and it is unlikely that as many as 100 applications will be received in the first year. Later on it will probably become necessary to fix a definite establishment of the Reserve of the Royal Flying Corps.

The Central Flying School.

Situation.—The Central Flying School should be established on Salisbury Plain, on ground south-east of Upavon, the contract for the purchase of which has been signed. This ground must be

regarded essentially as a flying ground. It should only be used for the training of troops in so far as that training interferes in no way with the work of the Central Flying School.

The site has been inspected twice by a committee of experts in order to view it under varying conditions. They reported as follows:—

"This area is in every way suitable for the proposed purpose. It is better than any British aviation ground with which the members of the Committee are acquainted.

"A certain amount of ground is at present under plough, but there is nothing to prevent the formation of an excellent surface for rolling over very large tracts."

Apart from its excellence as a flying ground, however, the site selected presents the following advantages:—

It is situated in a lonely spot several miles from a railway station, and is therefore not liable to the inconvenience and danger of attracting large crowds of spectators.

The nature of the surrounding country is such that good landing places are available over a very wide area.

A good road runs through the centre of the aerodrome affording all necessary transport facilities.

The presence of large numbers of troops undergoing training on Salisbury Plain offers facilities for preliminary training in military reconnaissance.

It is conveniently situated with regard to the existing aerodromes at Aldershot, &c., for the commencement of cross-country flights, and is not too far distant from the sea at Portsmouth and Portland.

Courses of Instruction.—There should be three courses at the Central Flying School during the year, each course to last 4 months, which is considered to include a sufficient margin of time for leave of absence and spells of bad weather.

There appears to be no reason to suppose that one season of the year is less favourable than another for training in flying. It is possible that in summer there are more days during some part of which flying is possible. In winter, on the other hand, there are apt to be more days during the whole of which it is possible to fly.

The training to be carried out should include—

(i) Progressive instruction in the art of flying.

(ii) Instruction in the general principles of mechanics and the construction of engines and aeroplanes.

(iii) Instruction in meteorology.

(iv) Training in observation from the air.

(v) Instruction in navigation and flying by compass.

(vi) Training in cross-country flights.

(vii) Photography from aircraft.

(viii) Signalling by all methods.

(ix) Instruction in types of warships of all nations.

The naval and military flying establishments should undertake the more advanced training in observation and the transmission of intelligence.

The sooner the Staff for the Flying School is selected the better, for as soon as possible the members should be formed into a Committee to draw up the syllabus for the first course of instruction for submission to the War Office.

It is estimated that the number of flyers required for the Navy is forty a year.

To provide the war establishment for the seven Aeroplane Squadrons that are considered necessary for our Expeditionary Force, 182 officer flyers and 182 non-commissioned officer flyers are required. This will entail passing through the Central Flying School one quarter of this total number annually, if it is assumed that under present conditions a flyer can hardly be expected to remain at active aeroplane work for more than 4 years.

If, in excess of actual Naval and Military requirements, a margin is allowed of, say, 25 per cent. for pupils undergoing instruction who fail to obtain certificates of proficiency either through sustaining injuries or through loss of nerve, the total service requirements as regards the annual intake of pupils at the school are as follows:—

One-quarter military war establishment of flyers, 91; Royal Navy, say, 40; add 25 per cent., 33; total, 164.

In addition it appears desirable to allow for the entry of (say) fifteen civilians during the course of the year, or five for each course of instruction.

Hence the total number to be passed through the Central Flying School in each year will be:—

To maintain the naval and military establishments, 164; Civilians, 15; total, 179.

Thus, having regard to the foregoing considerations, it would appear necessary to estimate that for the immediate future, accommodation should be provided for sixty pupils at the Central Flying School in each term. As these numbers are liable to be increased, when the requirements of the Army other than those of the Expeditionary Force are decided, the school should be readily capable of expansion.

Aeroplanes.—Steps have already been taken for the purchase of twenty-five aeroplanes for the Central Flying School, and deliveries will commence as from the 30th April, 1912.

The makers have been called upon to meet all necessary requirements.

Buildings.—Experience has shown that buildings of a permanent nature are very much more satisfactory, and ultimately more economical, than temporary buildings. Moreover, temporary huts are not well suited to the climatic conditions of Salisbury Plain.

Having regard, however, to the fact that the Central Flying School may require large expansion in the near future, and more especially that temporary buildings can be erected far more rapidly than permanent ones, all buildings, including sheds, should at first be of a temporary nature, without prejudice to the construction of more permanent buildings in the future.

All plans and specifications are now ready and tenders have been invited for the erection of temporary barracks, sheds, workshops, and a small hospital, at an estimated cost of approximately £25,000.

Transport.—It will be necessary that complete war transport for two flights of aeroplanes should be provided at once for the Central Flying School.

General.—The Instructional Staff will require a few weeks to assemble, tune up, test and accustom themselves to the new aeroplanes, but it may confidently be expected that the first course will be completed before the close of 1912.

The Naval Wing of the Royal Flying Corps.

Provisional Organization.—The Naval Wing of the Royal Flying Corps will be established for the present at the Naval School at Eastchurch. For the immediate future its energies will be devoted mainly to elementary training in flying, so as to provide a nucleus of flyers for the first requirements of the Navy, pending the establishment of the Central Flying School, and to experimental work in the development of aeronautics for the Navy.

In a short time the preliminary training in flying will be undertaken entirely by the Central Flying School, and the Naval Flying School will then be utilized for experimental work, and for the specialised training of naval ranks and ratings and of selected civilians in naval air work.

It is impossible to over-estimate the importance of experiments for the development of hydro-aeroplanes, and in flying from and alighting on board ship, and in the water under varying weather conditions. Until such experiments have proved conclusively how far such operations are practicable it is impossible to forecast what the rôle of aeroplanes will be in naval warfare, or to elaborate any permanent organization. The present organization must therefore be regarded as provisional.

Personnel.—The Naval Flying School at Eastchurch will, for administrative purposes only, be provisionally under the orders of the Captain of H.M. ship "Actæon," and all officers and men will be borne on the books of the "Actæon."

Aeroplanes.—Steps have been taken for the purchase of twelve aeroplanes, hydro-aeroplanes and floats for first requirements.

In selecting the types for purchase it has been deemed desirable to test a number of types with a view to arriving at the most suitable pattern for naval service. As soon as a satisfactory type of aeroplane for future use has been evolved, orders will be given so as to ensure that there are always not less than two machines of the same type available.

The prospects of the successful employment of the rigid type of airship are not sufficiently favourable to justify the great cost, and it is therefore recommended that the naval experiments should be confined to the development of aeroplanes and hydro-aeroplanes. The utmost vigilance will be taken, however, in watching foreign developments of the airship, and the present recommendation will not be taken to prejudice a reopening of the question, should important developments occur.

The Military Wing of the Royal Flying Corps.

General Principles of Organization.—At present no military requirements beyond those of the Expeditionary Force, which are of urgent importance, are being dealt with. It must be borne in mind, however, that considerable extension will be necessary in order to provide for the requirements of those military forces which are not included in the Expeditionary Force.

For the future, the Military Wing of the Royal Flying Corps should comprise all branches of aeronautics, including aeroplanes, airships, and kites. All these are required for the same purpose and should work in close co-operation.

The present Air Battalion, R.E., ceases to exist under this scheme. Its personnel and matériel should be absorbed as far as required in the Royal Flying Corps.

The purposes for which aeroplanes will be required in land warfare are as follows:—

- Reconnaissance.
- Prevention of enemy's reconnaissance.
- Inter-communication.
- Observation of artillery fire.
- Infliction of damage on the enemy.

Having considered the organization of the aeronautical forces of other Powers, so far as information is available, the establishments laid down below would appear to provide a suitable organization for the Expeditionary Force of 6 divisions and 1 cavalry division, viz.:—

- Headquarters.
- 7 Aeroplane Squadrons, each providing 12 aeroplanes.
- 1 Airship and Kite Squadron, providing 2 airships and 2 flights of kites.

1 line of communication flying corps workshop.

Administration.—The administration of the Military Wing will be carried out by the War Office.

Flyers, &c., Required for Seven Aeroplane Squadrons.—

Up to the present time the authorities have only attempted to train officers as flyers. It is now proposed to train non-commissioned officers and men as well.

It is considered that the minimum number of trained flyers should be two per aeroplane. Of these one should be an officer, and, in the case of one-seated machines, both should be officers. For purposes of calculation, however, one officer and one non-commissioned officer flyer are allowed. The number of flyers required on this basis is shown below:—

7 Squadrons.—Officers: commanders, 7; 3 sections, 84; total 91. Non-commissioned officers: sergeants, 7; 3 sections, 84; total, 91.

In addition, it is necessary to provide a Reserve to meet casualties, and it is considered that this should be on a basis of 100 per cent. for six months' wastage.

The total number of flyers required will therefore be:—

	Officers.	N.C.O.'s
For war establishment and 7 squadrons ...	91	91
Reserve	91	91
Total	182	182

In addition to flyers the necessary mechanics should be provided for the maintenance of machines, &c.

Peace Establishments.—The first requisite is to provide the trained personnel for the formation of the war establishment of the flying service.

Eventually it may be possible to draw up a more economical peace establishment, when the Reserve of the Royal Flying Corps has been developed sufficiently to enable the Military Wing to count on an effective organized Reserve.

Distribution of the Aeroplane Squadrons.—N.C.O.'s and air mechanics* will be required as engine drivers, fitters, carpenters, smiths, sailmakers, riggers, &c. Selected N.C.O.'s and air mechanics should also be trained as flyers. To provide this personnel, it will probably be necessary to rely largely on direct enlistment, except, perhaps, as regards flyers.

The period recommended is 4 years. On completion of the period of continuous service, re-engagement should be allowed from year to year, or transfer to the Reserve of the Royal Flying Corps on the recommendation of the Commanding Officer of the Military Wing, or of the Commandant of the Central Flying School.

Commissioned officers joining the Royal Flying Corps should be seconded, and other ranks should be transferred.

Aeroplanes.—The total number of aeroplanes required for the seven squadrons of the military division will be eighty-four. The completion of these squadrons, however, and the training of flyers for them at the Central Flying School must occupy some considerable time.

Sheds.—A shed of a portable type, suitable for service in the field, should be at once provided for each aeroplane as it is ordered. Permanent sheds should be provided at headquarters of squadrons, when the locations have been fixed.

The Use of Airships for Military Purposes.—Careful consideration has been given to the question of whether airships should still be used for military purposes.

The airship possesses the great advantage over the aeroplane in military warfare of being able to receive messages by wireless telegraphy; it is also able to transmit to greater distances.

Other countries can establish permanent sheds or shelters at convenient intervals throughout the country, where their airships can seek refuge in bad weather, and they are therefore able to make better use of dirigibles than this country, whose Expeditionary Force is more likely to be employed overseas. It is hoped,

* The term "air mechanic" is applied to denote men of the Royal Flying Corps below the rank of petty officer or serjeant.

however, that means will be found for overcoming difficulties in this respect, and experiments in this direction are now being conducted which give prospects of success.

On a general review of the foregoing considerations it has been decided that any immediate extension of the existing equipment of airships is unnecessary so far as the requirements of the Expeditionary Force are concerned, and the military requirements other than those of the Expeditionary Force are not in question. Having regard, however, to the persistence of all the great continental nations in experiments of this type of aircraft, it would be undesirable for the Army to abandon entirely the use of airships. Therefore, the present Airship Company, furnishing two airships, together with the kite equipment, should be retained, and should become an eighth squadron of the Royal Flying Corps. Kites form at present the only means of aerial observation in really high winds. Two flights of kites should therefore be included in the Airship Squadron of Royal Flying Corps.

Transport.—War transport will be required for each flight on its establishment.

The Royal Aircraft Factory.

Functions.—The existing Army Aircraft Factory has been renamed the "Royal Aircraft Factory." It will be administered by the War Office. It should carry out the following functions:—

1. The higher training of mechanics for the Royal Flying Corps.
2. Repairs and reconstruction for the Royal Flying Corps.
3. Tests with British and foreign engines and aeroplanes.
4. Experimental work.
5. The existing work in the manufacture of hydrogen, and generally meeting the requirements of the Airship and Kite Squadron.
6. General maintenance of the factory at present.

British and Foreign Engines.—It is important that this country should keep abreast of all practical developments in the aeroplane industry in all parts of the world. At the present time the primary need of this industry is the perfection of an entirely satisfactory engine. There are at the present time a number of aeroplane engines in the market which are believed to have given satisfactory results. It is extremely difficult, however, especially in the case of foreign engines, to obtain reliable information regarding them without purchasing power. Experience has shown that the foreign engine manufacturer attaches but little importance to the prospect of business in this country, and when approached either personally or by letter is prone to be suspicious of a desire on our part to learn by his experience.

Fifteen makers of engines are being approached.

The Aerodrome, South Farnborough.—Certain improvements are required in the aerodrome, South Farnborough.

At present there is one good flying ground at Cove Common, where the Royal Aircraft Factory is situated, and another on Laffan's Plain, and to make it possible to alight anywhere between these areas a passage has been cleared. It is very desirable, however, that another passage should be cleared in order to bring the area at Ball Hill into communication with the other two, and to allow of a circular flight over the combined areas. A passage should, therefore, be cleared as soon as possible from Laffan's Plain to the Royal Aircraft Factory *via* Ball Hill. These alterations would greatly increase the value of this aerodrome. Further improvements which could be effected here would be the clearing of a passage from Laffan's Plain to Fleet Pond.

Miscellaneous.

The Use of Private Aerodromes for Cross-Country Flying.—Great importance is attached to cross-country flights as an essential part of the training of a naval and military airman. If such flights are to be accomplished, however, it is indispensable that landing rights should be obtained at convenient intervals throughout Great Britain, and that shelter should be available whenever practicable.

The aerodromes at present existing happen to be very well situated for cross-country flying, and with a few intermediate points,

it would be possible to fly regularly and with fair safety from London to Scotland.

Negotiations have been opened with the managers of these aerodromes, excepting Eastchurch where the Naval Flying School provides all necessary facilities, to ascertain whether they would be prepared to grant to His Majesty's Government the occasional use of one shed together with landing rights for Government aeroplanes the flyers of which might desire to make use of such facilities during practice flights, &c., and, if so, upon what terms; observing that the shed would only be required occasionally so that all that would be necessary would be the grant of lien upon it.

The negotiations will be continued by the War Office, one of the conditions which will be fulfilled being the maintenance of stocks of petrol and oil above a certain specified minimum.

In order further to facilitate cross-country flying further landing rights will be obtained by the War Office at certain selected points. Most of these points would also be of considerable importance for naval or coast defence reconnaissance, and there can be little doubt that at many of them aerodromes must be established at some time for naval or military purposes. It is hoped that in time further extensions of this system may be made, so that flying rights may be established over the whole country.

The Encouragement of Private Enterprise.—Mention has already been made of the fact that importance is attached to the existence in this country of a flourishing private industry. This consideration has been given due weight to in the provisions regarding the purchase of aeroplanes, about half of which will be ordered from British firms. The arrangement under which officers and civilians desiring to enter the Royal Flying Corps as flyers will first have to obtain their Royal Aero Club certificate privately, and the rent to be paid for sheds and landing rights, should render some assistance to the private aerodromes.

A stimulus will thus be provided to private enterprise, which may assist the aerial industry to tide over the difficult initial period.

Meteorology.—Steps should be taken forthwith for the investigation of the atmosphere above this country. It is important, if the art of aviation is to progress and accidents are to be avoided, that the prevailing air currents and the meteorological conditions of the atmosphere should be studied. Such investigation must be based on the results of continuous observations from a number of stations, carefully co-ordinated, and extended over a long period.

Evidence of Dr. W. N. Shaw, Director of the Meteorological Office, has been taken on this question. Dr. Shaw laid stress on the importance of co-ordinating the theoretical and scientific experiments with the practical experience of flying men.

It is plain that little investigation has hitherto been undertaken in respect to those meteorological problems which more particularly concern flying men. Dr. Shaw indicated that he was prepared to conduct such experiments if the necessary funds were placed at his disposal.

A Meteorological Section should be established at the Central Flying School. Ultimately it may be found possible to include in this section officers who have been compelled to give up actual flying. For the immediate present, however, it will be sufficient to attach a meteorological expert to the Central Flying School for instructional purposes.

All officers at the Central Flying School should be instructed in meteorology.

All members of the Royal Flying Corps should be directed to report any unusual meteorological phenomena to the Meteorological Office.

Each wing or Squadron of the Royal Flying Corps, as well as the Flying School, should keep a meteorological log, and forward a monthly report to the Meteorological Office.

Such investigation of the air currents near the ground and in the upper atmosphere as will be useful to flying men should be undertaken by the Meteorological Office, and the results of their investigations and any phenomena of special interest should be communicated without delay to all branches of the Royal Flying Corps.

Further questions on Monday last drew from Col. Seely the information that the sum of £2,500 would probably be spent out of this year's Estimates upon the airship "Delta." The design of the new dirigible would depend on the results of the trials with the "Delta," and the amount to be expended this year on the new airship, therefore, could not be stated.

The British Army Clement-Bayard Airship.

QUESTIONED in the House of Commons as to the condition of the Clement-Bayard dirigible purchased by the Government, Col. Seely said the airship had been dismantled, as it was considered wholly unserviceable. The envelope of the dirigible leaked badly, and there were other defects.

The British Army Airships.

REPLYING to a question in the House of Commons as to the amount of money to be spent on the construction or purchase of Army dirigibles, Col. Seely, the Under-Secretary for War, said the airship "Delta" would be completed and a new one constructed at the Royal Aircraft Factory. It was proposed to train about 120 officers and men in airship work, but the actual cost of such training could not be definitely stated. The developments of the employment of airships for military purposes were being carefully watched. He did not know that he could state the actual cost of the airships, because they did not know how far they would get, but he would inquire whether it could be ascertained.

The Royal Aero Club of the United Kingdom

OFFICIAL NOTICES TO MEMBERS

Committee Meeting.

A MEETING of the Committee was held on Tuesday, the 16th inst., when there were present:—Sir Charles D. Rose, Bart., M.P., in the Chair, Mr. Griffith Brewer, Col. J. E. Capper, C.B., R.E., Mr. G. B. Cockburn, Capt. J. D. B. Fulton, R.F.A., Col. H. C. L. Holden, C.B., F.R.S., Prof. A. K. Huntington, Mr. F. K. McClean, Mr. J. T. C. Moore-Brabazon, Mr. Alec Ogilvie, Mr. C. F. Pollock, Com. C. R. Samson, R.N., The Marquis of Tullibardine, M.V.O., D.S.O., M.P., Mr. R. W. Wallace, K.C., and Harold E. Perrin, Secretary.

New Members.—The following new members were elected:—F. G. T. Dawson, A. Eveleigh A. Eagar, Edward Hotchkiss, Mrs. Longmore, Moss S. Myers, F. R. Samson, E. R. C. Scholefield and J. S. V. Stephen.

Aviators' Certificates.—The following Aviators' Certificates were granted:—

201. Lieut. A. E. Burchardt Ashton (Bristol Biplane, Salisbury).
202. Lieut. F. A. P. Williams-Freeman, R.N. (Bristol Biplane, Salisbury).
203. Com. Oliver Schwann, R.N. (Bristol Biplane, Salisbury).
204. Capt. P. W. L. Broke-Smith, R.E. (Bristol Biplane, Brooklands).
205. Lieut. L. C. Rogers-Harrison (Bristol Biplane, Salisbury).
206. Sub-Lieut. C. H. K. Edmonds, R.N. (Bristol Biplane, Salisbury).
207. D. G. Young (Burgess-Wright Biplane, Brooklands).

The request of the Aero Club de France for the Club to give its sanction to the issuing of an aviator's certificate to Mr. E. Scholefield was considered, and the necessary permission granted.

Army and Navy Aviation Prizes.—The Committee, after examining the certificates of the flights recorded in this competition, unanimously resolved that the prizes be awarded as follows:—

Army, £500—Lieut. B. H. Barrington-Kennett, February 14th, 1912, on Nieuport, 50-h.p. Gnome, at Salisbury Plain ... 249½ miles

Navy, £500—Lieut. A. M. Longmore, R.N., March 11th, 1912, on Short tractor biplane, 70-h.p. Gnome, at Eastchurch ... 172 "

A letter from Mr. A. Mortimer Singer, the donor of the prizes, enclosing cheques amounting to £1,000, was received, and the chairman kindly promised to forward the prizes to the successful competitors.

A unanimous vote of thanks was passed to Mr. A. Mortimer Singer for his generous prizes, and also for his kind suggestion of a further prize for this year.

Gordon Bennett Aviation Cup.—A letter from the Fédération Aéronautique Internationale notifying that the Aero Club of America had fixed the date for this contest for September 9th, 1912, at Chicago, was read.

F.A.I. Conference at Brussels.—A special conference of the International Committee formed by the Fédération will be held in Brussels on May 17th and 18th next to deal with the question of the Law of the Air. This conference will be presided over by Mr. Roger W. Wallace, K.C., and the other delegate from the club will be either Mr. M. O'Gorman, Mr. Griffith Brewer, or Capt. Bertram Dickson.

Vienna Conference.—The Annual Conference of the Fédération Aéronautique Internationale will take place in Vienna, commencing on June 20th next.

Appointment of Timekeepers.—The following timekeepers were appointed for the year:—

F. T. Bidlake, J. H. Burley, T. D. Dutton, A. V. Ebbelwhite, A. Fattorini, C. P. Glazebrook, H. Hewitt Griffin, J. B. Hyland, James M. Inglis, A. G. Reynolds, J. E. Rhodes, F. Straight and Z. Wheatley.

Sub-Committees.—The following Sub-Committees were appointed for the year:—

Finance.—G. Brewer, E. C. Bucknall, G. B. Cockburn, Prof. A. K. Huntington, A. Mortimer Singer, and R. W. Wallace, K.C.

Competitions.—F. P. Armstrong, E. C. Bucknall, G. B. Cockburn, Capt. A. E. Davidson, R.E., Col. H. C. L. Holden, C.B., F.R.S., Prof. A. K. Huntington, Major F. Lindsay Lloyd, F. K. McClean, J. T. C. Moore-Brabazon, N. C. Neill, Alec Ogilvie, Mervyn O'Gorman and E. V. Sassoon.

Technical.—Prof. J. H. Biles, Col. J. E. Capper, C.B., R.E., G. B. Cockburn, Com. F. Creagh-Osborne, R.N., Alexander

Duckham, Capt. J. D. B. Fulton, R.F.A., Col. H. C. L. Holden, C.B., F.R.S., Prof. A. K. Huntington, Major F. Lindsay Lloyd, Alec Ogilvie, Mervyn O'Gorman, and Com. C. R. Samson, R.N.

Foreign Relations.—Griffith Brewer, Capt. Bertram Dickson, Sir Henry Norman, M.P., Mervyn O'Gorman, The Marquis of Tullibardine, M.V.O., D.S.O., M.P., and R. W. Wallace, K.C.

House.—E. C. Bucknall, C. G. Grunhold, E. Gordon Lennox, C. F. Pollock, and E. V. Sassoon.

Grounds Inspection.—S. a'Court, E. C. Bucknall, G. B. Cockburn, F. K. McClean, J. T. C. Moore-Brabazon, N. C. Neill, Alec Ogilvie, and James Valentine.

Club Flying Ground.—E. C. Bucknall, J. W. Dunne, Hon. Maurice Egerton, Capt. E. L. Gerrard, R.M.L.I., Prof. A. K. Huntington, F. K. McClean, Alec Ogilvie, and Com. C. R. Samson, R.N.

Balloon.—G. Brewer, John Dunville, Philip Gardner, Dr. W. J. S. Lockyer, J. T. C. Moore-Brabazon, C. F. Pollock, A. Mortimer Singer, and R. W. Wallace, K.C.

Publicity.—R. Wherry Anderson, Prof. A. K. Huntington, C. F. Pollock, and Stanley Spooner.

Library.—C. G. Grey, T. O'B. Hubbard, Prof. A. K. Huntington, and Stanley Spooner.

Public Safety and Accidents Investigation.—A. E. Berriman, G. B. Cockburn, Capt. J. D. B. Fulton, R.F.A., Col. H. C. L. Holden, C.B., F.R.S. (Chairman), J. H. Ledebour, F. K. McClean, W. O. Manning, Alec Ogilvie, Mervyn O'Gorman, Major-Gen. R. M. Ruck, R.E., Com. C. R. Samson, R.N. and Staff-Surgeon Hardy Vesey Wells, R.N.

The Chairman of the Club, Sir C. D. Rose, Bart, M.P., is *ex-officio* member of all Committees.

Legislation.

The following will be invited to form the Committee:—

Alan H. Burgoyne, M.P.	Sir Charles D. Rose, Bart., M.P.
A. Du Cros, M.P.	(Chairman of the Club).
J. Norton Griffiths, M.P.	Lionel N. Rothschild, M.P.
W. Joynson-Hicks, M.P.	G. J. Sandys, M.P.
Arthur Lee, M.P.	Hon. A. Stanley, M.V.O., M.P.
G. A. Lloyd, M.P.	Marquess of Tullibardine, M.V.O.,
Sir Alfred Mond, M.P.	D.S.O., M.P.
Sir Henry Norman, M.P.	R. W. Wallace, K.C.
C. F. Pollock.	

Manufacturers' Sub-Committee.

It was decided to convene a meeting of the Manufacturers at an early date, for the purpose of ascertaining their views as to the formation of a Manufacturers' Sub-Committee to watch over the interests of the trade.

Naval and Military Aviation.

The following letter has been addressed to all aviators:—

"DEAR SIR,—You will doubtless have seen in the daily press the announcement of the Government scheme for Naval and Military Aviation, copy of which I enclose for your perusal.

"The Committee of the Royal Aero Club is of opinion that this scheme should be carefully considered by aviators holding certificates, and also by those who contemplate taking their certificates with a view to offering their services subsequently to the Government. It is, therefore, proposed to hold a Conference of those interested at the House of Commons, on Tuesday, April 30th, 1912, at 6.30 p.m., at which Col. Seely, the Under-Secretary of State for War, has kindly promised to attend, when the whole subject can be thoroughly discussed.

"Should you desire to raise any questions as to the Government proposals, it will greatly facilitate the proceedings of the Conference if you will send in details, in writing, at the latest by Friday the 26th inst., so as to permit of full information being obtained on the points to be raised.

"Yours faithfully,

"C. D. ROSE, Chairman,

"HAROLD E. PERRIN, Secretary."

Members wishing to attend this Conference are requested to send their names to the secretary.

166, Piccadilly.

HAROLD E. PERRIN, Secretary.

AIR EDDIES.



Sidney V. Sippe, late of the Avro School, who is conducting the hydro-aerodrome tests at Barrow.

watching the arrival of the car and the departure of his visitors, flew back to his headquarters to await their arrival.

Mr. A. M. Ramsay is, by the way, the son of Sir William Ramsay, late Professor of Humanity at Aberdeen University, whither he returned not long since to receive the honorary LL.D. degree of his Alma Mater.

A word for Prevost after the magnificent flight he accomplished in bringing over the new 70-h.p. two-seater Deperdussin monoplane, destined for the British Navy, from Paris to Eastchurch, a distance of over 200 miles, in 3 hours 55 mins., flying time.

On the previous Sunday and Monday he was flying at Nancy. Wednesday and Thursday were occupied at Rheims testing new machines prior to delivery to the French Army, and on Friday he tried out the machine at Issy. He flew it to Eastchurch on the Saturday. He travelled to London Saturday night, had dinner, and left again for the Continent at 9 p.m. By travelling all night he reached Rennes in Brittany in time to fly at the Military Commission demonstrations at four o'clock in the afternoon. Would some of our English pilots were given an opportunity of displaying such vigour. But it will come, and possibly sooner than a good many anticipate.

When one comes to weigh up matters, one cannot but agree that the results obtained by Sippe on the Avro hydro-biplane constitute something of a record, of which we Brits should be proud. The machine is the result of British brainwork, is, including the engine, all-British throughout, and is being flown by a British pilot under the direction of a British officer, who is, out of patriotism, financing the tests himself. It compares very favourably with foreign aquaplanes when a British biplane that has already seen much service, of 310 square feet of supporting surface, and fitted with an engine nominally rated at 35-h.p., but giving more by virtue of drilling auxiliary ports, can get off the water after a run of under a hundred yards. Sippe was up 200 feet on Friday of last week, in spite of his engine temporarily missing fire somewhat badly.

Fixton's was a good flight from Brooklands to Salisbury last Thursday week on a Bristol two-seater biplane, carrying one of his pupils, Mr. Harold Lane, as passenger. The trip of over 60 miles was accomplished in an hour in spite of a side wind. So cold was it up there at 3,000 feet, that they both had very cold feet by the time they reached their destination—quite natural cold feet—not an attack of that type of nervous malady peculiar to some aerodrome frequenters.

When Ewen and his friend Ramsay, of the Grahame-White School, went over to see the Caudron machine in flight one day last week, they were treated to an incident which at least illustrates to some extent the progress that the art of flying has attained these days. Arriving at Noyelles some ten miles away from the Caudron establishment, they telephoned of their arrival, and were informed that as M. Caudron was not at that moment at hand it would be a good plan to ring up again in about a quarter of an hour.

Telephoning again, they heard that M. Caudron, on being informed of their arrival, had immediately flown off on his 50-h.p. racing biplane to meet them. Almost as soon as this message was received the French aviator came in sight and circling above their heads at 1,500 ft. dropped a letter to the effect that he had despatched his motor car from Crotoy to take them to his aerodrome. Until the arrival of his car he treated them to a little exhibition of what his machine can do in the air, and after

Things took an unusually exciting turn down at Brooklands last Saturday and Sunday through the handicap races that some of the principal pilots down there arranged amongst themselves. The handicapping was exceedingly good, too, considering there was little data to work upon, for the finishes on both days, especially on the Saturday, were very thrilling. So much interest did the events arouse that the Brooklands club have decided to assist in making races of this kind a feature in the week-end flying at the track by contributing towards the expenses of the winner. Although I hear that several people interested in flying intend to put up trophies in connection with these competitions, it seems a pity that, for the present at least, those who take part in these races should have no greater incentive to provide good flying than a chance of winning a prize to which they have themselves solely subscribed and of striving to maintain the reputation as pilots that they have severally earned. After all the races will undoubtedly prove a very good "draw" for the Brooklands aerodrome, and I really think that club ought to see that the pilots taking part in the racing should be relieved from having to provide any of their own prize money.

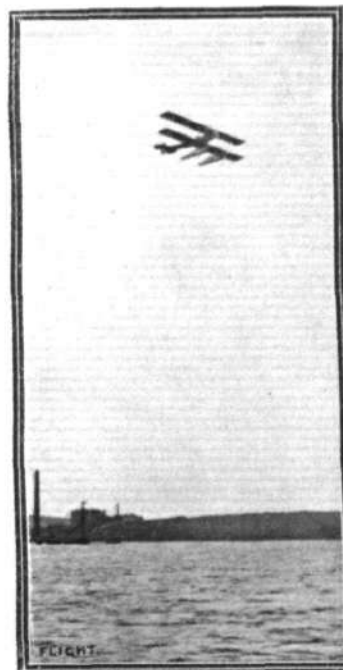
Ewen's offer to sell his first three Caudron machines, either racing monoplanes or two-seater biplanes, fitted with the new little V-type Anzani, at £300 each, ought to be snapped up pretty quickly, and should give the machines, of which he has just taken up the agency, a good send-off.

I know I am voicing the sentiments of all those interested, even remotely, in flying, in extending our heartfelt sympathies to Mrs. Cody, who must be suffering great anxiety through the exceptional misfortune that has overtaken both her husband, our sturdy British aviation pioneer, and her son Frank. It was while Mr. S. F. Cody was instructing from the passenger seat his pupil, Lieut. Fletcher, that the accident occurred. He was thrown a considerable distance out of the machine, and sustained serious injuries to his head and legs. In hurrying home by bicycle to break the news of the accident to his mother, Mr. Cody's son Frank ran over a dog, and was thrown from his machine with such force that he too sustained severe injuries, and was carried unconscious to their home just a few minutes before Mr. Cody was brought there by motor car.

Signor Sabelli, who has been doing a lot of good flying at Brooklands recently, is really one of the best pilots our English schools have turned out for many a long day. His machine, too, a 28-h.p. Anzani-Deperdussin, must come in for a share of the honours, for never before, to our recollection, have we seen such a low-powered machine remain in the air for such a long time as when Sabelli kept circling over Brookland's track at a height of 1,500 ft. for 1 hr. 8 m. on Sunday last. Pierre Prier, when he was with Blériot's at Hendon, kept up for over an hour on an Anzani-engined machine, but I don't seem to think he beat Sabelli's time.

The Mortimer Singer Army and Navy prizes have been awarded, the Army prize going to Lieut. B. H. Barrington-Kennett for his flight at Salisbury Plain of 249½ miles on a 50-h.p. Gnome-Nieuport monoplane, on February 14th, and the Navy prize being secured by Lieut. Longmore, R.N., who covered 172 miles at Eastchurch, on March 11th, on the 70-h.p. Gnome-engined Short tractor biplane. Lieut. Longmore figures this week as a "Flight Pioneer." Lieut. Barrington-Kennett's portrait appeared in FLIGHT of September 16th last year.

"OISEAU BLEU."



Sippe well up on the Avro hydro-biplane over Cavendish Dock, Barrow.

FROM THE BRITISH FLYING GROUNDS.

Brooklands Aerodrome.

THE first half of last week was rather stormy and only a little work was done. On Tuesday, April 9th, the wind dropped a little after 6 p.m., and Raynham brought out the Burgess-Wright, giving passenger flights to his pupils. Fleming was on the Bristol biplane, finishing with a fine spiral *vol plané* from over 1,000 ft., while Pixton made a pretty flight on the Bristol two-seater monoplane. Lane on the single-seater machine of the same make was practising straight flights. Fisher took the Flanders monoplane for a short spin, and "Partridge" was making short flights on the A.B.C.-engined Howard-Wright monoplane. April 10th and 11th were very bad days, though Raynham managed to take Hedley for a short trip in the mornings. On Wednesday evening Percival brought out his resuscitated biplane but came to grief through side-slipping on a turn, carrying away the bottom right-hand plane.

On Thursday afternoon Valentine made a trip on his two-seater Bristol monoplane in a strong wind, no one else venturing out. Friday was a much better day and a number of machines were in evidence. In the early morning Fisher put up a 45-mins. flight on the Flanders climbing every now and then to about 1,000 ft. and coming down to about 200 ft. with spiral *vol planés*. Young passed the tests for his pilot's certificate during the day, on Sopwith's Burgess-Wright. Raynham gave Hedley instruction on the same machine, this pupil being now promoted to the pilot's seat. Sopwith was also out carrying passengers, amongst them Mrs. Loche King and Valentine. Knight was on Vickers No. 2 machine and Pashley made some circuits on the Humber, having at last got the motor to run satisfactorily. At the Bristol School Pizey put in some high flights on the Angani-engined school monoplane and also on the biplane, finishing with long spiral *vol planés*. During the afternoon Valentine took Sopwith over to Hendon on the Bristol monoplane. Sopwith then flew his 70-h.p. Blériot back to Brooklands with Hucks as passenger. Valentine also started on the Bristol, but when over Hounslow Heath felt unwell, so landed near the barracks where he left his machine under a police guard for the night. Next morning he flew back to Brooklands.

Saturday was a splendid day, and those of the public who payed Brooklands a visit in the afternoon were given a splendid exhibition of flying. In the morning a good deal of tuition work was done at the various schools. Capt. Wood made some circuits on the Vickers, and Beatty flew a number of part turns on the same machine. Mackworth, on the Bristol biplane, made a good flight, rising about 500 ft. and performing a number of right-hand turns and figures of eight.

In the afternoon it was suggested that a short cross-country handicap race should be got up. This proved a great attraction, both to the pilots and spectators. Mr. Handasyde undertook the handicapping, and how well he succeeded is shown by the fact that the first four machines crossed the finishing line within 5 seconds

of one another. The course was from a line in front of the sheds to Chertsey Bridge and back, a distance of about six miles.

The starters were:—

		m.	s.
T. O. M. Sopwith.	Blériot monoplane (70-h.p. Gnome) ...	scratch	
E. V. B. Fisher...	Flanders monoplane (60 h.p. Green)...	0	39
F. P. Raynham...	Wright biplane (50-h.p. Gnome) ...	2	28
H. Spencer	Spencer biplane (50-h.p. Gnome) ...	3	12
Collins Pizey	Bristol biplane (50-h.p. Gnome) ...	4	35

Pizey took a passenger, thereby improving his handicap slightly. When the machines neared the finish it was seen that Sopwith was fast overhauling Pizey; Raynham and Fisher being in close attendance, Pizey crossed the line only about 35 yards ahead of the Blériot which was travelling at a speed approaching 70 miles an hour.

The result was: Pizey, 1st; Sopwith, 2nd; Fisher, 3rd; Raynham, 4th. Spencer, who came in last, lost a lot of time by climbing to a greater height than the others and steering too much to the right while making for Chertsey.

Altogether the race was voted a great success, and it is proposed to hold similar events every suitable week-end. It was got up purely on the spur of the moment by the aviators themselves, the Brooklands authorities having nothing whatever to do with it. It would seem well worth the Brooklands Club's while to put up small prizes for these weekly handicaps, in view of the attraction they will be to the public. Beside the race, there was any amount of solo and passenger flying.

Fisher on the Flanders was out, on and off, most of the afternoon, reaching good altitudes. At the Bristol school Pizey took a number of passengers for flights, Capt. Allen on the Anzani-engined monoplane flew well, and Bettington, a new pupil, was out rolling for some time, experiencing the usual difficulties of keeping a straight course. Sopwith made a number of fine flights with passengers on his 70-h.p. Gnome-Blériot and on the Wright, and Raynham was also out a good deal on the latter machine. Duigan brought out his Avro biplane and flew a number of circuits with a 35-h.p. E.N.V. Petre on the Deperdussin racer was also in the air.

Sunday was another excellent day. As on the previous day a good deal of tuition work was got through in the morning. Allen on the Bristol school monoplane flew four excellent circuits, Bettington then took it out for rolling, showing excellent progress and commenced to make short hops. Unfortunately he landed rather heavily and bounced into the air, bounced again, and then a third time, finally landing on his nose and wiping out the undercarriage. He himself was unhurt.

On the Vickers, Knight flew a number of circuits and then handed the machine over to Beatty, who made several figures of eight.

In the afternoon another handicap race was inaugurated, Mrs. Raikes kindly presenting a cup for the winner. The course was from the aerodrome to Chertsey Bridge, back round the hangars, and then round a corn mill about a mile or two from Brooklands. As the actual distance was not quite known, the handicapping was more difficult than on Saturday.

The entries were—

		m.	s.
T. O. M. Sopwith	Blériot monoplane (70-h.p. Gnome) ...	scratch	
E. V. B. Fisher...	Flanders monoplane (60-h.p. Green) ...	0	52
F. P. Raynham...	Wright biplane (50-h.p. Gnome) ...	2	56
Lieut. Lawrence	Bristol biplane (50-h.p. Gnome) ...	4	48
Collins Pizey	Bristol biplane (50-h.p. Gnome) ...	5	18

Pizey again took Garne as passenger. Sopwith won, flying very low all the time, and making very sharp banked turns. Fisher was second, 35 secs. behind, with Pizey a very good third.

The best flight of the day was by Sabelli on the racing Deperdussin with Y Anzani engine. He flew for an hour and five minutes, reaching an altitude of 1,350 ft. Petre and Chinery were both out for long flights on Deperdussins. The two Bristol biplanes were kept busy, Nesham and Mackworth making good flights. While Pizey put in a lot of work, both solo and with passengers. Sopwith had the Wright out several times as well as his Blériot. Hedley on the Wright was making straight flights finishing with a bad pancake which broke the two bottom spars and a strut.



Mr. T. O. M. Sopwith, the winner of the flying handicap on Sunday from Brooklands to Chertsey Bridge and back, with his lady passenger who accompanied him.

Monday and Tuesday this week were both very bad days and only a little tuition work could be done in the early mornings. This week should see the Avro monoplane—which was illustrated last week—out. It will probably be flown by Lieut. Parke.

In the near future several new machines will be seen at Brooklands, an Etrich monoplane having been expected for some weeks, also there are rumours that one of the new Hanriot's will shortly make its appearance here.

Eastbourne Aerodrome.

OWING to the bad weather which prevailed over the Easter holidays, it was decided to postpone the race between Lieut. Lawrence and Messrs. Fowler and Yates until Whit-Monday. On Thursday (last week) Mr. Fowler tested the new machine which the Eastbourne Aviation Co. have built. It appeared to handle very well, and showed quite a good turn of speed. The machine is of the Blériot type, and is fitted with a 50-h.p. Gnome. The workmanship in her does great credit to the E.A.C.'s mechanics. On Friday Messrs. Yates and Gassler were out. Yates made several fine flights on the Gnome. On one occasion he was up well over 1,000 ft., and did an excellent *vol plane* from about 500 ft., pulling up within a few yards of the sheds. On Tuesday Gassler and Fowler were out. Gassler made one or two good flights on the Anzani. Fowler was up on the new 'bus, but only remained in the air for about ten minutes, as he found the wind somewhat gusty.

Filey School (Blackburn Aeroplane Co.)

AFTER a long period of boisterous weather, Saturday last dawned calm, so Brereton the chief pilot had out the Isaacson-engined Blackburn and put up some very pretty flights before handing her over to De Villiers who taxied along the sands to Filey and back. Scott was next out making long steady hops, gradually increasing in length, till he flew a half-mile at a steady altitude of 25 ft. Meanwhile Brereton was performing on the Gnome-Blackburn at a height of 200 ft. De Villiers then took charge of the Isaacson, and put in some long hops, which finished the day's work.

Sunday was the same as Saturday as far as climatic conditions went, and the populace of Filey were treated to some of the finest flying yet seen in Yorkshire. Brereton started off with the Gnome, which was missing badly. Despite this he circled the bay at an average altitude of 800 feet, and was performing all the evolutions known to a crack flyer. In all he covered about 30 miles and was up for just over half an hour. Scott then took charge of the Isaacson, and made several trips to the town and back at a fair altitude, his landings being very good. De Villiers then did some long straights about 40 feet up, but seemed to find some difficulty in landing owing to people lined up on the sands.

Liverpool Aviation School (Waterloo, near Liverpool).

ON the 8th inst. Melly had out the Blériot two-seater and flew to the Freshfield Aerodrome with Hardman as passenger, at a height of about 800 ft. The trip both ways was uneventful, and although there was a fair breeze, flying was easy.

The school machine was again ready for trial on the 11th, after fitting a new cylinder to the Anzani, but there was too much wind for flying.

Mr. Birch took his first lesson in engine control on Saturday, but the engine becoming somewhat stiff it was decided to dismantle it to trace the cause.

After re-keying the crank-pin in one of the fly-wheels, the Anzani engine was again ready on Monday, and Melly flew three times about half-a-mile each to test it, which proved quite satisfactory, notwithstanding a 10-mile wind. Hardman then took the machine, and made several excellent straight flights of 300 or 400 yards each, both with and against the wind. Birch then went out for the first time, rolling until it was too dark for more work. He showed an admirable control of the engine.

London Aerodrome, Collindale Avenue, Hendon.

Grahame-White School.—Mr. Lewis Turner on Wednesday, last week, was instructing pupils in the evening and Mr. Ramsay rolling on monoplane No. 4.

Mr. Lewis Turner early on Friday was on the new biplane No. 5 for test after alterations to ailerons. Engine running well but tail flying low and after a couple of hours' various tests and trials, the machine was returned for adjustments which were quickly effected. Mr. Turner then had it out again and made another test flight with a mechanic as passenger and found the machine flying much better.

Messrs. Manton, Morris, Roupell all rolling on biplane No. 3, Mr. Hucks at circuits on monoplane No. 6 and biplane No. 3. Mr. Lewis Turner also on biplane No. 1 for test flight, afterwards with a passenger and Mr. Biard making straight flights on same machine, also Mr. Hucks at circuits. Mr. Turner then on machine No. 3 with a passenger before vacating seat to Mr. Biard who flew several circuits; Major Liles also on same machine doing straights.

During Saturday, the new Grahame-White Biplane No. 5 was put through a good day's testing. Mr. Lewis Turner made many flights during the morning and afternoon, amongst them being three passenger flights. Mr. Grahame-White also made an exhibition flight on the same machine afterwards, taking up a passenger. Mr. Hucks was out for several flights on monoplane No. 6 and biplane No. 3.

Mr. Gates put in some circuits on biplanes Nos. 1 and 3, and Mr. Biard was also flying circuits on No. 3.

Sunday proved a splendid flying day, and a full day's work was put in by Messrs. Grahame-White, Lewis Turner, and B. C. Hucks. Mr. Grahame-White was making exhibition flights on the new biplane No. 5, and also on his 70-h.p. Nieuport. Mr. Lewis Turner on biplane No. 5 made over a dozen flights during the day, and carried nine passengers in succession. Mr. Hucks was busy at circuits on monoplane No. 6, Mr. Lewis Turner concluding the day's work by circuits on the old school 'bus.

Mr. Gates on Monday was on biplane No. 3, making straights in a 15-mile wind. Mr. Lewis Turner flew circuits on the same machine, and Mr. Manton was rolling. Mr. Hucks also made two or three fine flights on monoplane No. 6.

Blériot School.—M. Pothet on Wednesday last week made a couple of circuits, and appears to be coming on quite well. M. Aubert put in four straights.

Mr. Tremlett, who is now ready for his *brevet*, next day made a trio of eights in the early morning, and M. Pothet a brace of circuits, whilst Messrs. Aubert, Morris, and Teulade confined themselves to straights.

Friday, Mr. Tremlett was again doing eights and M. Pothet a circuit, whilst Messrs. Thomsen, Morris, Hall, Aubert, and Teulade contented themselves mainly with rolling exercise.

On Saturday, Mr. Tremlett got well on the road towards his ticket, and did four excellent figures of eight, M. Pothet a pair of good circuits, Messrs. Thomsen, Welburn, Aubert, Morris, and Hall putting in good straights.

Mr. D. Corbett Wilson, whose new 50-h.p. Gnome-Blériot had arrived at Hendon and was put together during the week, took his



Sabelli at the wheel of his Deperdussin monoplane after he made a flight of 1h. 8m. at an altitude of about 1,500 feet on Sunday last at Brooklands.

machine out during the late afternoon and, making his first flight on a Gnome machine in England, flew round Edgware and Stanmore, finishing up with an excellent landing *en vol plané* in the middle of the ground.

Mr. D. L. Allen meanwhile took out his similarly engined machine and went for a flight round St. Alban's Cathedral, doing the return journey of about 22 miles at the rate of just 60 miles per hour.

Tuesday last Mr. Lucien Tremlett went aloft at 6.10 in the morning and passed in excellent style his tests for the Royal Aero Club Certificate, getting his altitude at the first attempt. The tests were observed by Messrs. W. H. Ewen and George Prensliel.

Mr. D. L. Allen soon after took out his 50-h.p. Gnome-Blériot and disappeared in the direction of Harrow at about 1,200 ft. which town he circled and, coming back, reported the ground very difficult to see owing to mist. He made his usual perfect landing on arrival.

W. H. Ewen School.—A brilliant week's work has been got in at the school, and all the pupils are progressing rapidly. Already equipped with Blériot and Deperdussin monoplanes, the school is being considerably enlarged by the introduction of Caudron monoplanes and biplanes. The first of these biplanes, fitted with a 35 "Y" Anzani has just arrived. On Wednesday last, Mr. "Edmund" commenced his rolling practice in good style, and Warren, Dubois, and Lieuts. Pennycuik and Kerrich were doing some good work on the Blériot. Ewen made three flights on the 28-Deperdussin, being in the air for over two hours, passing round Harrow, Edgware and Finchley at the height of 1,000 feet. On Thursday, the wind dropped in the evening and an hour's useful school work was put in, Lieuts. Kerrich and Pennycuik each making a nice little flight, and Miss Prentice and Messrs. Ware, Gist and "Edmund" showing great improvement in their rolling, while Messrs. Dubois, Baumann and Warren were flying. A very big day's work indeed was put in on Friday, the pupils being out with the school machines almost continuously from 5 a.m. to 7 p.m. Ten of the pupils were on the ground, all of whom got in some excellent work without any mishap beyond a broken wire. Miss Prentice is making excellent headway, rolling the full extent of the ground in absolutely straight lines, and Messrs. "Edmund," Ware, Gist and Lawford have thoroughly overcome the difficulty of keeping the machine in a true line. Lieuts. Kerrich and Pennycuik each got in several straights and they are showing exceptional aptitude in the handling of the Blériot. Baumann, Dubois and Warren each made several nice flights. For the benefit of some intending pupils, Ewen put up several exhibition flights on the 28-Deperdussin, doing some very fine racing round the course, and cutting past the pylons with beautifully-banked turns. It being an ideal morning on Saturday, the school work again started at 5 a.m. with Lieuts. Pennycuik and Kerrich and M. Baumann showing splendid improvement in their flying on the Blériot. M. Dubois mounted the *brevet* Deperdussin for the first time, and put in two excellent flights, handling the machine with all confidence, and landing very neatly, after which Warren did a short flight on the same machine. In the evening the school machines were again out, and Messrs. Lawford, "Edmund," and Baumann, and Miss Prentice and Lieut. Kerrich got in some good rolling and flying. On Sunday morning M.M. Dubois and Baumann and Lieut. Kerrich were out at 5.30 a.m., getting in some good practice. In the evening M. Baumann made a very nice flight on the Blériot, and Lieuts. Pennycuik and Kerrich got in some excellent straights. Messrs. "Edmund," Lawford and Gist and Miss Prentice were all handling the Blériot confidently and showing marked progress. Monday was rather windy for school work, but Lieuts. Kerrich and Pennycuik managed to get in a little practice in the morning. On Tuesday morning Miss Prentice, Messrs. Ware and "Edmund" and Lieuts. Pennycuik and Kerrich were out at 5 a.m. and managed to get in some splendid practice for nearly two hours before the wind rose.

Salisbury Plain.

Bristol School.—No out-door work was possible all day Monday last week, on account of the boisterous state of the weather.

On Tuesday, Jullerot was testing the conditions, but decided to abandon work for the day, the previous day's wind still prevailing.

Yet another day had to be spent in the hangars on Wednesday, attention being confined to assembling machine and adjusting motors. However, much useful work was done.

A great improvement had taken place in the weather by Thursday morning, and after making a trial, Gordon England gave two trips to Lieut. Saunderson and a Naval Lieutenant, both of whom are prospective pupils. Lieut. Head was doing fine things on biplane No. 43; Lieut. Ashton also being out on No. 66, Lieut. Head afterwards ascending on the latter machine. Lieut. Antonini made a circuit on one of the school monoplanes, whilst Jullerot made several short trips. Useful elementary work was done by Lieut. Ercole on one of the monoplanes, Col. Smeaton also being out for some

practice. A good first trip was made by Senor Campana, who has only been at the school just over a week, the pupil landing near Stonehenge, Jullerot and England flying over to him, the latter flying back the machine with the pupil as passenger. Bendall was up for a solo, Gordon England taking a passenger for a flight.

In the evening, Jullerot made a flight to Fargo and back, but on account of the strong wind, school work was not resumed.

Friday morning was ideal, and good use was made of the calm, all the pupils being out. After the usual trial, Lieut. Edmonds made three good solo flights, carrying out figures of eight with sharp bankings, and showing himself to be quite ready to undergo the necessary tests for the *brevet*. Mr. Montague Jennings also gave evidence of the splendid progress he has made in the flights, his landings being neat and very graceful. Lieut. Ercole made a short trip on one of the monoplanes, whilst Gordon England was up on one of the tractor biplanes for three trips, during which the machine showed itself to be a good flyer, answering the controls perfectly, and showing a fine turn of speed. Jullerot took Lieut. Grace, of the Cavalry School, for a flight, this officer afterwards ascending with Bendall. Two good solos were made by Lieut. Hall on biplane No. 43, this pupil getting on well with the machine. Just at this time Mr. C. C. Howard Pixton was sighted on the "Bristol" monoplane, flying with Mr. Lane, a pupil of the Brooklands School, as passenger, both having flown from Brooklands. He landed splendidly by means of a *vol plané*, and said he had had an excellent journey. The distance of just over sixty miles, as the route taken was by way of the railway line and not straight, was covered in an hour exactly, a slight cross wind was blowing the whole of the time and this somewhat impeded the flight of the machine. Gordon England then set off on a Tractor biplane and was flying for about twenty minutes, Jullerot in the meantime going out for half-a-dozen instructional trips. This brought the morning's work to a conclusion.

Towards the evening England had the Tractor biplane brought out and made a flight, landing at Fargo, Pixton ascending on biplane No. 55 with a mechanic to see what was the matter, afterwards flying back to the hangars. Jullerot gave a flight to Lieut. Styles, the instructor ascending immediately afterwards with Lieut. Grace for a short cross-country, arriving back at the schools after having been in the air for three-quarters of an hour. Lieut. Edmonds made a solo on biplane No. 43, and then successfully passed the tests for his certificate, his observer being Mr. Cockburn. It is interesting to note that this pupil has only had a week's tuition, and great credit is reflected at the methods adopted at the schools by turning out an accomplished flyer in so short a time. Two good solo flights were carried out by Mr. Montague Jennings, Lieut. Antonini also being up on one of the school monoplanes. A passenger flight was given to Lieut. Nicholins by Jullerot, during which Senor Campana went out on the monoplane and again descended at Fargo. Jullerot flew over to him with Lieut. Ercole, the latter flying the machine back to the hangars, Senor Campana being passenger to Jullerot. Gordon England gave a high flight to Lieut. Edmonds, reaching nearly 1,000 ft., whilst Bendall made a circuit, Lieut. Hall two flights on biplane No. 66 and practice on the monoplane, Colonel Smeaton also being out for two trips on one of the biplanes.

Hotchkiss was the first up on Saturday morning, making a couple of flights, the first of which was before the arrival of anyone, the second being made with a pupil as passenger. Four successive solos were made by Lieut. Hall, good landings being effected in each case. Lieut. Edmonds was out, whilst Jullerot took Mr. Montague Jennings for *vol plané* practice, the instructor afterwards ascending with Lieut. Nicholins. Mr. Jennings made four good solos on biplane No. 43, but on account of the wind rising further work was abandoned. Later in the day Jullerot was testing the conditions, but decided that the wind was too strong for school work.

In the evening, however, the wind had dropped, and after a flight lasting ten minutes by Jullerot, he ascended with three prospective pupils, Capt. Grace, Lieut. Saunders, Lieut. Hardaa, whilst Gordon England gave flights to Captain Grace and Lieut. Ercole. Good work was done by Lieut. Hall, who made no fewer than five solos, performing very creditably, and showing himself quite ready to undergo the tests for his certificate. Mr. Montague Jennings also made five solo flights, as also did Lieut. Edmonds, Senor Campana going out for two trips on one of the school monoplanes. Lieut. Antonini made, first of all, two solos on one of the single-seater monoplanes, and then ascended for about fifteen minutes on the double-seater monoplane, managing both machines in a clever manner. Jullerot went on one of the two-seater monoplanes, making a flight lasting for fully 35 minutes, during which time he made several clever circuits, and landed by means of a clever *vol plané*. Lieut. Ashton was out for rolling practice on one of the school monoplanes, afterwards going up for two solos on a biplane, Lieut. Ercole was out rolling on a monoplane, whilst Bendall made five different flights with pupils on No. 66.

Sunday was a very gusty morning, and Gordon England and

Jullerot were out at an early hour testing the conditions, but no school work was done. Jullerot again ascended at 3 p.m., but no improvement had taken place. At 3 p.m., Lieut. Burney was taken for a trial flight, Gordon England also ascertaining the state of things, but it was deemed inadvisable to start work. Later, Pixton took Lieut. Grace and Lieut. Saunders for flights, whilst Jullerot took Lieut. Wall of the Cavalry school. At 6 p.m., it was found that the wind had dropped somewhat, and England had a tractor biplane brought out, and made a really good flight, Jullerot being on a two-seater monoplane. Pixton then made his first ascent on the tractor-biplane, flying several circuits, and showing himself to be quite at home with his new mount, eventually landing in a graceful manner. Lieut. Antonini then made a flight of three circuits in a two-seater monoplane, Bendall flying with Capt. Grace and a Mr. Fraser.

No sustained flying was possible Monday on account of the wind, Jullerot and Gordon England both making trials.

Royal Flying Corps.—On Wednesday of last week work was confined to the hangars by the boisterous wind and heavy showers. During the day Brigadier-General Henderson and the General Staff paid a visit to Salisbury Plain and inspected the Royal Flying School. Pilot Macdonald had out the R.E.P.-Vickers monoplane



A Fire at Barrhead.

A DISASTROUS fire occurred at the aerodrome of the Scottish Aviation Co., Barrhead, near Glasgow, on Saturday last. Two monoplanes and a biplane were practically destroyed and the damage is estimated at £1,600.

Brooklands to Salisbury on Bristol Monoplane.

MR. C. H. PIXTON has shown himself as clever a pilot of a monoplane as he is of a two-decker machine, and his flight from Brooklands to Salisbury on Friday of last week still further emphasizes his capabilities as a cross-country flyer. Leaving Brooklands at 5.30 on a Bristol two-seater monoplane, and accompanied by a pupil, Mr. Lane, he set off in the direction of Salisbury, taking his course by the railway line. He arrived at Salisbury at half past six and the distance covered in the hour was a little over sixty miles, the railway being a little further than going straight. Mr. Pixton who was somewhat impeded by a cross wind, maintained an altitude of about 3,000 ft. during his flight.



Messrs. Howard Pixton and his pupil, Harold Lane, on the two-seater Gnome-Bristol monoplane, on which they flew on Thursday morning of last week from Brooklands to Salisbury, a distance of over 60 miles in one hour.

and was doing some straight flights. This machine is now housed in a portable hangar, as all the other sheds belonging to the R.F.C. are in use. On Thursday there was a welcome change in the weather and Macdonald was again on the R.E.P.-Vickers doing fairly well, while Capt. Fulton and Lieut. Reynolds were both out on F. 4 and F. 5 respectively, flying high around the camp. A fine flying day was Friday, when Capt. Fulton took up several brother officers for flights, and Lieut. Reynolds made several cross-country trips around Stonehenge and Portland. At one time he was up to a height of 2,000 feet on "F. 5," and after half an hour's flight came down with a specially fine spiral *vol plané*. During the day Capt. Fulton made nine flights, and Lieut. Reynolds eight. In the evening, Lieut. Fox arrived from Farnborough at a height of 1,000 feet. He returned to Farnborough on the following morning, when Lieut. Reynolds intended to fly to Cheltenham for his superior certificate, the weather, however, changed, and after making a trial flight he decided to postpone his attempt. On Sunday Capt. Loraine was out on biplane "F. 4" banking his machine very finely during some sharp turns and flying at a good height. On Monday Macdonald was on the Vickers monoplane, while Capt. Fulton on "F. 4" and Lieut. Reynolds on "F. 5" put in some good scouting practice.



Mr. S. F. Cody Meets with a Mishap.

THE Cody "Cathedral" came a cropper on Monday last while being piloted by Lieut. Fletcher, with Mr. Cody in the passenger's seat. It appears that, in avoiding a motor car, the machine had to climb steeply and ran into some trees. Mr. Cody was thrown out, and fell a considerable distance, sustaining injuries to his head and legs, but Lieut. Fletcher, who retained his seat, escaped with a shaking and some bruises. Mr. Cody was taken to his home in a motor car, and by a strange coincidence his son Frank, whilst cycling home to break the news, collided with a dog, and sustained such injuries that he himself was taken home unconscious. The sympathies of all concerned in British aviation will go out to the plucky pilot who, we are glad to learn, is making good progress towards recovery.

A Cross-Country Handicap from Brooklands.

DETAILS of the cross-country handicap race from Brooklands, successfully held on Saturday last, will be found in the notes from the Brooklands flying ground on page 352.

Aviation at Chatham Dockyard.

MEMBERS of the Chatham Dockyard Engineering Association enjoyed an instructive paper on "Aerial Flight" by Engineer-Commander G. W. Baldwin, R.N. recently, and by way of encouraging the members to take up the subject, the committee have offered a prize for the best essay on Mr. Baldwin's lecture.

An Hydro-Aeroplane for the British Navy.

FOLLOWING the report of the British officers who witnessed the hydro-aeroplane competition at Monaco, the British Admiralty, as we stated before, have ordered an hydro-aeroplane of the Henry-Farman-type similar to that piloted by Fi-cher, and which won the first prize. Should this machine prove all it promises it will be the first only of an extended order.

Propellers: a Challenge.

AFTER experimenting with propellers and tractors for some eighteen months, Messrs. Wild Brothers, of Daisy Bank Works, Unwin Street, Salford, have designed one which they believe will give better results than any other on the market at the present time. In order to support their claims, Messrs. Wild Brothers write us that they are prepared to put their propeller in competition against any other make.

A Flight over Windermere.

ON Saturday last Mr. Gnosspelius made a fine flight on his single-decker aquaplane over Lake Windermere. Starting from Mr. Wakefield's headquarters, South of Bowness, the machine flew down the lake to Lakeside, then up to the Beech Hill Hotel, back again to Lakeside, and then back to the hangar. It was in the air for some twenty minutes and although it did not rise very high it flew very steadily.

A "Live" Club in New Zealand.

THE hon. sec. of the Dunedin, N.Z., Aero Club reports that his club is flourishing, and is organising a model exhibition to be held next September. They would like to hear from any firms or club in the United Kingdom who would send exhibits. Full particulars can be obtained from Mr. Bernard Hughes, hon. sec., 603, Cargill Road, Dunedin, New Zealand.

FOREIGN AVIATION NEWS.

Col. Hirschauer Succeeds General Roques.

As we foreshadowed in a recent issue Col. Hirschauer, in command of the *sapeurs aéroliers* at Versailles, has now been officially appointed to succeed General Roques, as Inspector General of Military Aeronautics. The appointment appears to have given satisfaction in military and flying circles, where the splendid qualifications of Col. Hirschauer for the position are recognised.

The Entente Cordiale Celebrations at Nice.

As was only natural, the aeroplane played a part in the entente cordiale celebrations at Nice at the end of last week, and during the manoeuvres of the fleet at least half a dozen machines were seen flying over the warships.

Fatal Accident to Lieut. Boncour.

THE fatal accident which overtook Lieut. Boncour at Bar le Duc on Saturday emphasizes the need for aviators to be free from physical defects. Finding the chilly temperature at a height of 100 metres too trying, the officer commenced to plane down, but being short-sighted he only observed when too late that he was very close to the tops of some trees. He then attempted to make the machine rise again, but the engine not restarting the machine crashed to the ground, the pilot suffering instant death.

Flying Through a Gale.

SOME idea of the recent progress in aviation in France can be gathered from the splendid flight made by Bedel on a Morane monoplane between Nancy and Bar le Duc on the 10th inst. Fighting his way through a cold wind and rain the aviator took 2 hrs. 25 mins. to cover the 88 kiloms. (55 miles) between the two points, a distance which in the ordinary way would have been traversed in something under an hour. During the same gale, Lieut. Battini with his mechanic on a M. Farman machine made a flight of an hour over Bar le Duc, Behonne, and Vaincourt during which the machine was buffeted by the strong wind, and Lieut. Battini was eventually brought down by a squall of snow.

Flying to Mailly Camp.

ON the 13th inst., Bedel on his Morane monoplane flew over from Bar le Duc to Mailly Camp, while Tabuteau, also on a Morane, arrived from Paris. During the evening these two pilots gave thrilling exhibitions, while other flights were made by the military aviators, Capt. Bares and Michaud, and Lieut. Bordage, Vaudein, and Battini on their Farman machines.

Flying from Rheims to Douai.

LEAVING Rheims on his Farman biplane on the 9th inst., Lieut. Pierra started for Douai, and was brought down at the Buse Camp, with a broken petrol pipe. Two days later he arrived at La Brayelle aerodrome being escorted in by Lieuts. Sensever and Vanduck of the Douai Flying Centre.

Flying in Mixed Company.

ON the 15th inst. Lieut. Gourlez on a Deperdussin, Lieut. Pierra on a Farman, and Bachet on a Breguet, flew from Douai to Ronchin Camp, near Lille, in order to see the infantry manoeuvres. In the evening they returned to Douai.

More Frontier Reconnoitring by Aeroplane.

DURING last week a number of flights were made by the Farman pilots at Nancy along the frontier. On the 11th inst., for instance, Lieuts. Cheutin, Nicaud, and Varein flew to Moncel, where they carried out a number of flights, and on Sunday Lieuts. Cheutin and Menard went on by aeroplane to Toul, where they will carry out further experiments in reconnoitring.

Long Flight at Blériot Military School at Pau.

ON the 9th inst., at the Blériot Military School at Pau, Lieut. de Vergnette made a flight of two hours' duration at a height of 1,000 metres, and Lieut. Loubignac was flying for 2 hrs. 10 mins. at a height of 1,500 metres. Both these trials were for superior certificates.

A New R.E.P. Machine.

GORDON BELL was testing a new R.E.P. machine, known as model "F.1912," on the 10th inst., at Buc. Although the wind was blowing about 15 metres a second, the machine rose easily and gracefully to a height of 2,000 metres. Lieut. Campagne on another machine, was in the air for an hour and a half. On the 13th inst., M. Granel was up to 1,200 metres during a 55-minute flight, and Gordon Bell carried two friends on the two-seater for a trip over Versailles.

The New Tellier Monoplane.

ON the 11th inst., at St. Omer, Marc Pourpe was testing a new racing monoplane built by the Tellier firm. He made a couple of cross-country trips during which the machine attained a speed of about 120 k.p.h. When coming down for the third time the machine hit an obstruction on the ground. The chassis and one wing were considerably damaged while the pilot sustained a broken leg and was badly bruised.

Bielovucie Flies to Toul.

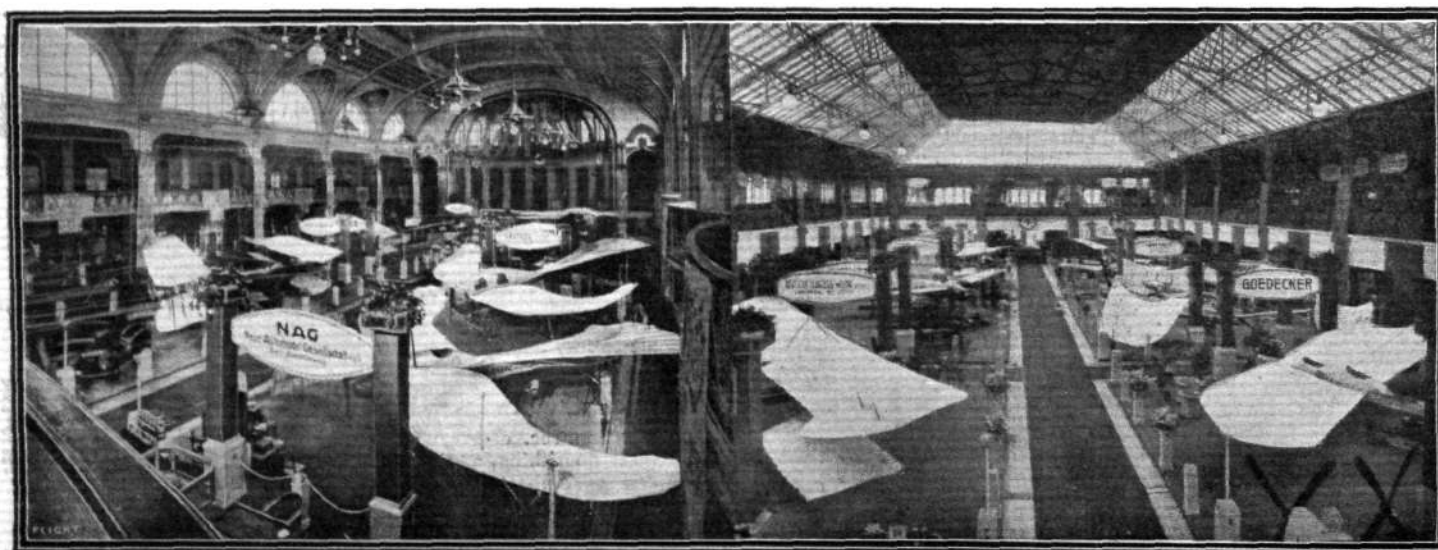
ON the 13th inst., Bielovucie on his Deperdussin flew from the Betheny Aerodrome, near Rheims, to Toul, having to fight against a strong wind, and taking three hours for the trip.

Three-Kilometre Flight with an Aviette.

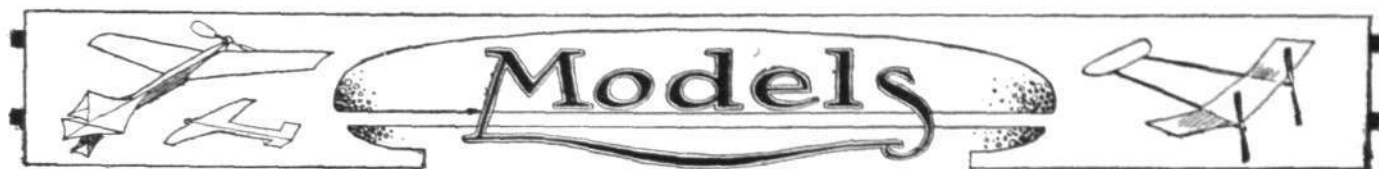
ONE of the entrants for the Peugeot prize, M. Alexandre Flament, has, it is reported, succeeded in making a flight of 3 kiloms. The propelling power is provided by the aviator's arms with which it is said he can operate the propeller at a speed of 1,200 r.p.m. and obtain a tractive force of 149 kilos. On the 14th inst., he is said to have started from his training ground at Massy Palaiseau and rising to a height of 5 metres flew for 3 kiloms. being then brought down at Igny owing to a warping wire catching in one of the pulleys. Confirmation and further news of this interesting machine will be awaited with more than usual interest.

Cross-Country Flying in Germany.

CONTINUING his tour round Germany by aeroplane Vollmuller on the 9th inst., flew from Bremen to Hanover covering the 125 kiloms in 45 mins. Two days later he started to fly to Schneverdingen, but was brought down by a hailstorm at Schwarmstedt.



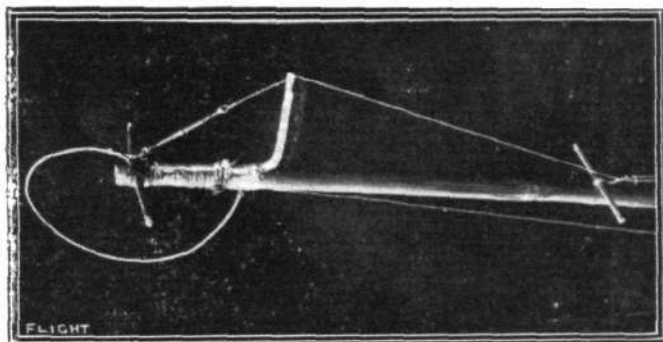
General views of the Berlin Aeronautical Exhibition.



Conducted by V. E. JOHNSON, M.A.

Model Flying on Public and Private Grounds.

"It is imperative that all models shall be fitted with a Protector over Motor Rod, such as a Wire or Cane Loop."—Extract from *Kite and Model Aeroplane Association Rules*.



Model aeroplane protector.

Yet another common (or public model flying ground) has just been closed to aeromodelists in the vicinity of London, owing to a child being hit on the head and injured by an unprotected model. But very few now remain, and unless vigorous action is taken at once, there will very soon be none at all. Aeromodelists have simply themselves initially to blame for what has occurred. One ground after another has been closed, and almost invariably the cause has been the same. *There is no case on record of anyone—child or adult—having sustained the slightest injury when the model has been fitted with a proper protector, as shown in the photograph.*

The protector shown is of cane; steel wire is even better, being stronger, and if covered with a piece of rubber valve tubing makes an ideal protector.

Even from the aeromodelist's point of view of mere machine efficiency and protection, the use of such is to be advocated; the additional weight and head resistance are practically nil, and in actual landing many a smashed rod may be saved, for such a protector forms an admirable skid as well.

Under the above circumstances one would naturally expect the employment of such to be universal, but such is by no means the case; in fact, we believe it is not too much to say that it is the exception rather than the rule. A few days ago we were in the model aeroplane department of a large emporium. *Not a single model on sale so far as we could see was so fitted with a protector, except some tractor screw models carrying a front loop for propeller protection.* In other words, anyone buying one of these models and taking them on to a public ground and flying them, became at once a source of danger to the public.

Aeromodelists complain of the action of the Conservators and Councils in closing the commons to them, and talk a great deal about the illegality of so doing. We venture to say that if in the first instance proper care and forethought had been exercised by the aeromodelists themselves, such action would not have been taken, for the simple reason that there would have been no excuse for such.

A model aeroplane unfitted with a proper protector both can be and is a source of injury both to itself, the flyer thereof and last, but not least, to the spectator. In a question of this kind we consider absolutely plain speaking to be the best in the long run. It does not matter in the least that you can prove by probability that the chances of a spectator having his eye knocked out are seven million, three hundred and fifty-four thousand, three hundred and two to one, against his becoming one-eyed. Probability will not give him a new eye—not even a glass one.

Pilots of full sized machines are not allowed to fly in a manner dangerous to the public—if they do so they at once are made to know the consequences.

The fact of the matter is that the question of models has not yet been properly dealt with. A club or a number of aeromodelists have come on to some common or public ground and flown their models—some, we are afraid most of them, unprotected. After a time—it may be brief or it may be a long time—the inevitable result is bound to happen, someone—usually a child—being hurt, and the ground is thereafter forbidden. The Conservators or

governing body have simply taken the short cut in a matter which, being of a novel character, and one with which, until properly explained to them, they could not possibly be competent to deal—and forbidden all model flying. It is quite a natural action to take and we do not see what else could be expected of them.

It is perfectly useless for deputations from the Kite and Model Aeroplane Association to wait on the Conservators and Councils (as is being done) with a view to recovering lost privileges—whilst members of other clubs or private individuals go on flying unprotected models.

Every aeromodelist who takes an unprotected model on a public ground and flies it is driving a nail—it may be only a tin-tack or it may be a good old six-inch wire nail) into the coffin of model aeroplaning, and every model maker selling such a machine is doing exactly the same thing.

The size, or even weight, of the model is immaterial—a four-ounce or, for that matter, even a two-ounce unprotected model is just as likely to cause injury to your eye as one weighing as many pounds; as a matter of fact, it is far more likely, for the simple reason that an ordinary spectator clears out of the way of a large model, realising danger, whilst a small toy-model is treated with more or less contempt until it may be too late. It is, of course, a well-known fact that a body moving straight towards you appears to be travelling at a far less velocity than it actually is.

Comparisons have been drawn between the dangers attending such games as golf, football, cricket, &c., and model aeroplane flying—such comparisons ought never to have been made. In the first place there is no danger if the model be properly protected. In the second place it is of course a well-known fact—a fact known to all spectators as well as players—that either or both do run certain risks in these games—such being the case—so far as is possible due precautions are taken. Ordinary spectators know nothing about model aeroplanes in nine cases out of ten and are just as likely to let one hit them as not. The thing is small, light—apparently travelling quite slowly—(though if flying with the wind the velocity may be well over 30 miles an hour) and why trouble to move—or at any rate there is no need to move yet; movement does come—but too late and the harm is done; always be it noted from any unprotected model.

The remedy is perfectly simple—the passing of bye-laws by Conservators and Council *not for the prohibition of model flying on public grounds but for the fining of every aeromodelist flying unprotected models.* Under such conditions as these all public grounds can be once more opened to aeromodelists—under, of course, certain and suitable restrictions as in the case of every other sport or game.

In our opinion, nothing more disastrous has happened to the cause of model-aeroplaning, and those interested in it—whether professionally or otherwise—than this closing down of public flying grounds. Remove model flying from the public gaze and you remove it at once from the public mind; for no saying is truer than "Out of sight, out of mind." Its advantage as a public educator in the cause of aviation generally is at once lost, and its value as an asset in the national progress of the country becomes practically speaking nil.

We have an exact parallel to the example of the unprotected model aeroplane in the case of the unprotected prow in the racing rowing boat. Many years ago now, when the writer was an undergraduate at Cambridge—in one of the Lent Bumping Races—a fatal accident occurred owing to this cause, as a natural consequence, the prow of every boat has since been protected by a rubber ball or some such device, and the repetition of such an occurrence been rendered impossible. Prevention is always better than cure.

Model Flying on Private or Club Grounds.

In this case club members may have a right to please themselves as to whether they fly protected or unprotected machines. But the question is not even in this case one of right but of wisdom and expediency—moreover, as soon as spectators or non-club members are present they have at once the right to claim that every possible precaution be taken on their behalf.

Half measures have always proved worse than useless in settling any question of this kind. What is required is the immediate and universal adoption (no matter where or by whom flown) of the protected model only. It may please certain aeromodelists to demonstrate the wonderful strength possessed by their unprotected

frames, but the proper and safe place to test such is against a brick wall or a stout fence or some place where no possible damage can ensue save to the frames themselves.

The indiscriminate club flying of a number of models at the same time (far too common) should be at once suppressed. You can keep your eye on *one* model and keep the model out of your eye, but you cannot most certainly do so when half-a-dozen are going all over the place at the same time.

The matter is both urgent and pressing, and calls for immediate and vigorous action.

Second Official Tests.

The second series of officially recorded trials for distance and duration, held under the auspices of the Kite and Model Aeroplane Association, took place on April 10th, on the private flying ground (Parkside, Sudbury) of the Paddington and District Aero Club—both the records set up at the first trials were beaten. The previous duration record of 60 seconds (made by Mr. C. R. Fairey) by Mr. K. R. Weston, of the Paddington and District Aero Club, in a really excellent flight of 64 seconds. The model climbed well and reaching an altitude of certainly not less than a hundred feet had the advantage of the consequent glide to earth at the end of the flight.

The distance record (held by Mr. R. F. Mann) of 320 yards was surpassed by Mr. G. Rowlands whose best flight of 398 yards (distance due to wind velocity deducted) was practically speaking in a straight line. It was a very fine flight indeed. Mr. Rowlands' first flight was very nearly as good, viz., 389 yards. Actual distances flown 425 yards, 426½ yards, the wind velocity, as will be noticed, was therefore very slight indeed. No third flight was made by Mr. Rowlands. Mr. C. R. Fairey made three very good duration flights, differing by less than three seconds, but was unable to improve on his previous official record.

A very creditable duration of 50 secs. was put up Mr. R. Stedman with a very neat biplane, which flew really well. Why do we not see more of this most interesting type of model? Mr. W. S. Evans' model was undoubtedly capable of a far better duration than half a minute, if tuned up more; it was certainly not at concert pitch.

A very amusing incident occurred towards the close of the trials, during a very quiet interval in the official proceedings. A voice hoarse with indignation was suddenly heard to shout ("roar" would almost be a more correct interpretation) from the rear: "She's NOT upside down"; instantly all in front spun round like a teetotum, and there in the fast gathering gloom was seen a swiftly circling model—which was "not" after all upside down. Further details are unnecessary—any competent aeromodelist can mentally picture the whole thing.

Distance Records.

Mr. J. W. Burghope (hon. sec. Brighton Aero Model Club), writing *re* the above, observes: "I quite agree that it is of little use putting them into club notices. Nobody cares outside the club concerned. Some evidently think distances are never measured. Perhaps they judge by themselves. We have a large scale map of

Shoreham Aerodrome, with all the distances marked to nearest 25 yards. We always fly from one or two alternate places—owing to winds—and can tell pretty accurately with our map how far we fly. We certainly do not measure to the inch. Some time ago we used 100-yard reels of thread, but soon gave it up for the map method.

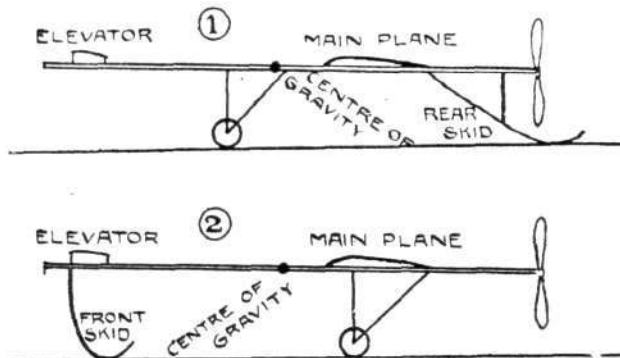
"In any case the distances are of little interest. Everybody knows a decent model will fly 400 yards. Personally I am sick of flying 'elastick.' They are so monotonous in their performances, you build the 1-1-P² and know it will fly almost at once with but little tuning up. Consequently I have gone back to the tractor 'scale' type. They are extraordinarily interesting after the fashionable 1-1-P². I am convinced it is possible to get a (more or less) scale model to go up to 150 yards with rubber motors."

Queries.

The following queries have been sent in by a correspondent, and as they are of somewhat exceptional interest we shall be pleased to hear what some of our readers have to say with respect to them; they are:—

1. In a twin-screw model of the usual type, 1-1-P²-O, which of the two directions for propeller revolution is best, and why? (a) In which the tops of the propeller revolve inwards; (b) in which the tops revolve outwards.

2. In a model designed to rise from the ground under its own



power, which position of the chassis, shown in the sketch, is considered the best and most efficient for an A frame.

3. Lately I have been watching some ducks rising from the bank of a river flying some distance and then alighting on the surface of the water. Just before they alight—when about 12 ins. off the surface—they stop flapping, extend their wings to their fullest extent and drop their feet, at the same time expanding the webs and placing them so that they will strike the water at a slight elevation. After a short glide they alight and cause a large disturbance on the surface of the water. Is this because of the inefficiency of their webs as hydroplanes or of the large weight of the duck's body as compared with its small wing area?

AERONAUTICAL SOCIETY OF GREAT BRITAIN.

OFFICIAL NOTICES AS SUPPLIED BY THE SECRETARY.

Programme of Meetings to be held at the Royal United Service Institution. April 29th, Monday, 6.30 p.m.; Chairman, Dr. W. N. Shaw, F.R.S. Capt. C. H. Ley, F.R. Met. Soc., on Aerial Topography. May 16th, Thursday, 8.30 p.m.; F. H. Bramwell, on National Physical Laboratory Research.

Military and Naval Course.—A series of three papers on military and naval subjects will be delivered at the R.U.S.I. on the following Wednesdays, May 29th, June 12th, and June 26th. Particulars will be announced later.

Informal Meetings.—Informal meetings for the discussion of set subjects are held at the Society's Offices, 11, Adam Street, Adelphi, on Mondays, from 5 p.m.:

April 22nd.—Blériot's report on monoplanes. May 6th.—Atmospherical conditions at the Hendon aerodrome. May 13th.—Double-engined aeroplanes.

Chairman.—Major-General R. M. Ruck has been elected Chairman of the Council for 1912.

Election of Members.—The following have been elected members of the Society: H. D. Carey, Sir George Greenhill, F.R.S., J. L. Hodgson, B.Sc., A.M.I.C.E.

Vice-President.—The Most Hon. the Marquis of Tullibardine has accepted the invitation of the Council to become a vice-president of the Society.

Election of Associate Fellows.—The next election of Associate Fellows will be held in June next. The last day for the receipt of applications will be Tuesday, May 28th, and the result of the election will be declared on Wednesday, June 12th. Application forms may now be obtained from the Secretary, and it should be noted that it is not necessary that the applicants should be members of the Society.

Students.—Students attending regular science, engineering, or aeronautical courses at recognised technical colleges, as well as those pursuing the scientific side of aeronautics professionally, are eligible for the Student's section, and should apply immediately if desirous of being admitted without entrance fee. The studentship is a branch of the technical side of the Society, which affords a technical status to those admitted thereto. Students may attend all meetings, receive the Society's publications, are admitted at half the usual membership fee, and are exempt from payment of entrance fee on transferring to the Associate Fellowship.

Foreign Members.—Residents abroad are advised of a new rule by which they can be admitted to membership at half the usual subscription and without entrance fee, i.e., at £1 1s. per annum.

Library.—Messrs. A. V. Roe have kindly presented lantern slides of their Avro biplane and aquaplane to the Society's Library.

T. O'B. HUBBARD, Secretary.

THE KITE AND MODEL AEROPLANE ASSOCIATION.

OFFICIAL NOTICES.

Officially Observed Flights.—On Saturday, April 13th, the official observers attended the ground of the Paddington and District Aero Club, at Parkside, Sudbury, for the purpose of observing flights for distance and duration for registration and establishing records. (The observers were Messrs. V. E. Johnson, M.A., E. W. Twining, and W. H. Akehurst, hon. sec.) The results were as follows: Distance (hand launched); G. Rowlands, 398 yards. Duration; H. R. Weston, 64 secs.; C. R. Fairey, 55 secs.; R. Stedman, 50 secs.; G. Rowlands, 44 secs.; W. E. Evans, 30 secs. Last month's results were beaten both for distance and duration when 320 yards and 60.4 secs. were done. Mr. G. Rowlands therefore holds the record for distance, and Mr. Weston for duration. Mr. Weston is a member of the parent body as well as a member of the Paddington club. The next trials will be held on the ground of the Blackheath Aero Club, on Saturday, May 11th, at 3 p.m., the Association having accepted the invitation of this club with thanks. Forms of application can be obtained on application. Entries close May 6th.

Kite Display, Model Competition and Presentation to Major B. Baden-Powell.—This afternoon, Saturday, the 20th, the Association will hold a meeting at the Plumes Hotel, Park Royal, on the occasion of the official taking over of the Man-lifting kite outfit presented by Major B. Baden-Powell to the Association. The programme arranged is: man-lifting display (weather permitting) from 2.30; Model Aeroplane Club contest between The Ealing and District Model Ac. C. and Aero Models Association (Northern Branch). Also model flying display by well-known members of the Association, 3 p.m.; tea 6 o'clock; presentation of testimonial and concert, 7 o'clock. The President, Lieut.-Col. F. C. Trollope will take the chair, supported by the vice-president and patrons. All interested are invited to attend, especially members, in honour of the Major, who has done so much to encourage aviation in this country.

The best way to reach the Plumes is by District Railway to Park Royal Station, changing at Acton Town.

W. H. AKEHURST,
Hon. Sec.

PROGRESS OF FLIGHT ABOUT THE COUNTRY.

Notes regarding Clubs must reach the Editor of FLIGHT, 44, St. Martin's Lane, London, W.C., by first post Tuesday at latest.

MODEL CLUBS.

Aero-Models Assoc. (N. Branch) (Sec., MALCOLM B. ROSS 15, HIGHGATE AVENUE, N.).

THE first inter-club match of this club took place at Finchley, on Saturday, 13th inst., with the Palmer's Green Aero Club. The competition was for duration, and the visitors gained a victory over the A.M.A. with an average of 56 secs. to 44½ secs. Results: Palmer's Green, Aero Club—E. R. Brown, 66 secs.; H. Lingard, 53 secs.; A. Trollope, 49 secs. Aero-Models Association—M. B. Ross, 59 secs.; R. G. Corder, 44 secs.; F. G. Hindsley, 31 secs. R. L. Rogers also put up good flights. Brown, with new 0-1-1-2P model, flew at first attempt for 53 secs., and obtained great altitudes, and fine *vol plane*. Ross's 7½-oz. machine, which made fine glides at the finish of steady flights, is 37 inches long, and fitted with two 10½-in. propellers. Lingard's model was steady and fast. Another 0-1-1-2P-type of machine was Trollope's model, which put up the altitude record for the afternoon. Corder's old A frame was doing very pretty circles at the beginning of the afternoon, but later the flights were rather erratic owing to bowed fuselage. With his flight of 31 secs., Hindsley considerably bettered his previous duration record.

Inter-club match with Ealing and District Ac. Club on Saturday, 20th, at Park Royal, at 3.30 p.m.

A general meeting is to be held to discuss the reorganisation of this club. Date later.

Birmingham Model Aero Club (Secs., R. COBBAM, G. H. WOOD, 8, FREDERICK ROAD, EDGBASTON).

ON Easter Tuesday, Mr. E. Trykle made a flight of 972 yds. in 103 secs. The flight included a glide of 30 secs. The same day Mr. G. Wilde made a flight of 852 yds. with a twin built on Trykle lines. The day was closed with an enjoyable social evening in the shed.

Last Saturday, Mr. Trykle made half a dozen flights, averaging 95 secs., the longest 101½ secs. Mr. G. Haddon Wood, with a small Trykle-type model, made flights of 74, 65, 61 secs., and Mr. G. Wilde came close with 69 secs. Next day, Mr. G. Baker brought up a large 5-ft. model, and obtained some flights towards the evening of about 40 secs. Messrs. M. Vale, W. Lunn, H. F. McManus, G. Baxter, W. A. King, J. E. Overton, E. Noble, and N. Stamps were also flying during the week.

Blackheath Aero Club (Hon. Sec., A. E. WOOLLARD, 48, HAFTON ROAD, CATFORD, S.E.).

DURING the week-end flying at Grove Park grounds as follows:—Mr. J. H. Dollittle's model flew at great altitudes, and at the same time made excellent durations, viz., 58 and 46 secs. Mr. Brown, by making a flight of 50 secs. duration, obtained the prize model awarded by the W. H. Co. Mr. Morris made an excellent "runner-up." Mr. Bailey with his 6½-oz. model, Mr. Plummer and Mr. Pizey with "A-frame" models, all obtained excellent flights.

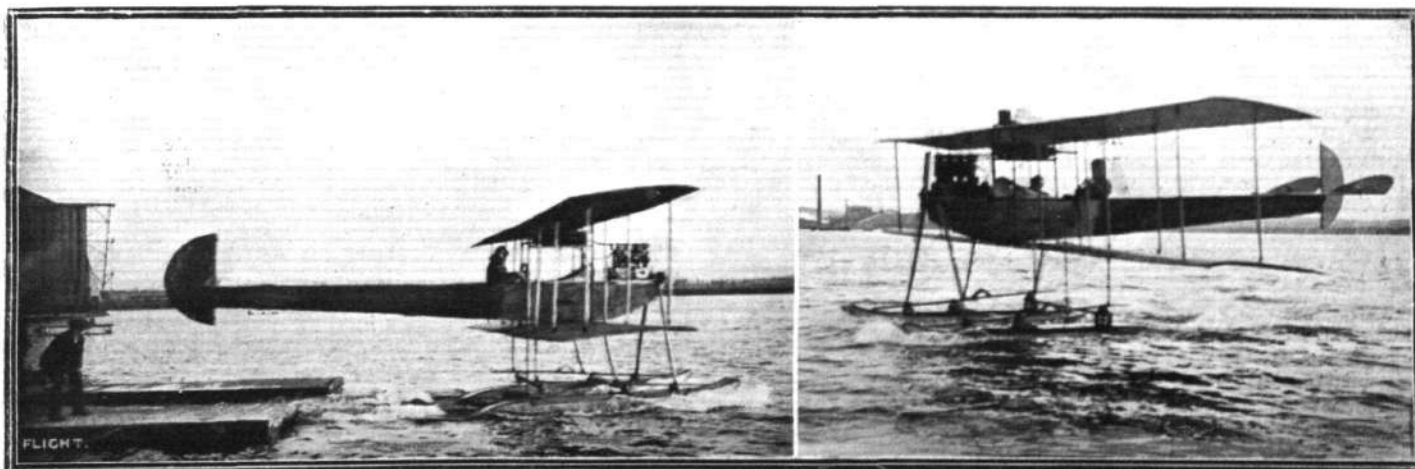
On Blackheath, Mr. J. H. Dollittle flew his 1-1-2P-O machine with great success. Mr. F. Whitworth made some flights with an "A-frame," whilst Mr. Hunt obtained a flight of approximately 100 yards with single-tractor model, which rose off the ground under its own power.

To-day (Saturday) flying at the Grove Park grounds.

Brighton and District Model Aero Club (Hon. Sec. A. VON WICHMANN, "KINGSLEIGH," KINGSWAY, HOVE).

ON Saturday, at Shoreham aerodrome, Mr. Bate got flights of over 400 yards. Mr. Bate building 4-ft. single-screw model, with wire fuselage. Von Wichmann, Wilkinson, Townsend, White and Orford also flying. Mr. Townsend's prizes to be flown for on duration formula: $\frac{\text{Duration in secs.} \times \text{Weight in ozs.}}{\text{Weight of rubber (ozs.)} \times \text{Area in sq. ins.}}$ Mr.

Burghope's big 32-oz. Nieuport to be tried to-day (Saturday 20th).



HYDRO-AEROPLANE EXPERIMENTS AT BARROW.—On the left Commander Schwann's machine, an Avro hydro-biplane, leaving its dock, with Sidney V. Sippe at the lever. On the right the machine is seen skimming the water just prior to taking the air, with its tail well up and the elevators just moved in the position for ascent.

Bristol Model Flying (Sec., R. V. TIVY, 3, ROYAL YORK CRESCENT, CLIFTON).

AT meeting on 13th. Excellent high flights by Messrs. House (described in error last week as Moore)—duration 36 secs.—Keyte and others. Next meeting April 27th at Sea Walls, at 3 p.m., when prize for "rising from ground" may be competed for. Weight to exceed 6 oz.

Coventry Aeroplane Building Society (Sec., J. W. SCHOFIELD, 22, KINGSTON ROAD, EARLSDON).

THE new workshop in Godiva Street now open is commodious and well lighted and suitable for constructing club glider and a large piece of ground suitable for erecting glider, tuning and practising models is available also to the members.

The usual Saturday afternoon practise flight on Hearsall and Stoke Park Common till after the haymaking season is over.

Dover and District Model Aero Club (Sec., H. D. DAVIS, "OAKVILLE," GODWYNE ROAD, DOVER).

SATURDAY competitions were again postponed, owing to some of the club's crack flyers being unable to attend. Best flights of the day by C. Sargeant, R. Wilson, H. D. Davis, and Whowells. Will McCall please come down to "Oakville," Godwyne Road, Dover (any evening), as the secretary has mislaid his address, and would like to see him about several matters. The postponed competitions (as announced in FLIGHT) will be held to-day (Saturday), starting at 2.45 p.m., on the Northfall meadow.

Ealing and District Aero Club (Sec., B. J. KIRCHNER, 1, QUEEN'S GARDENS, EALING, W.).

ON Saturday, at Greenford, good flying was witnessed by Messrs. C. Davies, A. Houlberg, G. Beeching, C. Chilcot, G. Pearson, and D. Chown. Mr. Houlberg had durations of 46½ secs. and 61 secs., while Mr. Davies had a duration of 45 secs. Mr. Davies and C. Chilcot were both using tail models (0-1-1-2P).

On Sunday, L. Kirchner, testing a model with various propellers, two pairs of which obtained good flights—average 500 ft. During the week Mr. C. Davies was flying several models for experimental purposes.

On Saturday (20th), contest for duration with the Aero-Models Association (N. Branch) at Park Royal, at 3.30 p.m. Team:—Messrs. C. Davies, A. Houlberg, L. Roche, C. Chilcot, R. S. Hall, and another. A challenge from the Blackheath Aero Club for a contest has been accepted. Provisional date, June 12th. Flying next Saturday at Greenford.

Hackney and District Aero Club (Sec., B. H. LONGSTAFFE, 47, JENNER ROAD, STOKE NEWINGTON, N.).

DISPLAY of models at Spensley Hall Friday last was well attended. The exhibits included the following: a triple screw monoplane by P. Gittus, a steam driven "Democella" type model by B. H. Longstaffe of 7 ft. span, full sized propeller by Mr. Taplin. On Saturday exceptionally good flying was witnessed by a record turn out of members. Messrs. Taplin, Gittus, Marman, Hill, Field, Burton Bond, and Longstaffe all flying well.

Higher Broughton Model Soc. (1, ESKRIGGE ST., HR. BROUGHTON)

A COMPETITION will be held on May 4th. The machines to be home-made, including propellers, and not to be under 4 ozs. Prize, a pair of propellers, value 3s. 6d., for furthest distance flown.

Manchester Model Ae.C. (40, BIGNOR STREET, CHEETHAM).

FIRST official flying meeting, on Saturday, April 20th, at 2.30 p.m., when cash prizes to the value of 10s. will be offered. The competition will be decided under following formula:—
Total weight × distance flown.

Weight of elastic used. The models must not weigh more than 4 oz. nor less than 3 oz. when complete.

Mr. W. H. Booth has offered two prizes of 10s. 6d. each, one for duration the other for distance flown, by a model embodying his (Redivalls) patent. Mr. Booth will explain details on the ground on Saturday. The competition will be open till the end of the season.

Paddington and Districts Aero Club (Sec., W. E. EVANS, 133, BUCHANAN GARDENS, HARLESDEN).

Last Saturday, the Kite and Model Aeroplane Association held their trials at the club's private flying ground. The honours of the day fell to Mr. H. Weston (member of both clubs), who broke the world's official record for duration for hand-launched models, his machine remaining in the air for 64 seconds; and to Mr. Rowlands, member of K. and M. A. Assoc., who established a new distance record, his machine landing 426½ yards from the starting post. A small deduction has to be made for wind velocity, which was nearly calm. Mr. Dollittle, of the Blackheath Aero Club, was present, and made an unofficial duration of over 63 seconds. About twenty members

were flying their machines with varying success, Mr. Cannell obtaining over 60 seconds' duration. Mr. H. Weston was also flying with great success a new single propeller 4-foot monoplane, the large circular flights being quite steady and on an even keel.

Saturday, April 20th, postponed point-to-point competition. In evening, at workshop, Mr. W. Evans will give practical demonstration in making carved propellers.

On April 27th, Mr. V. E. Johnson, M.A., brings his steam plant for model aeroplanes to show it running at club workshop.

New members, Messrs. F. W. Johnson and S. J. Whybrow.

Flying competitions, use of workshop, loan of books from library free to members. Subscription, 1s. per month; 10s. 6d. per annum.

Reigate, Redhill and District Aero Club (Sec., H. V. MAY, 4, LONDON ROAD, REIGATE).

MR. SUTTON with 2½-oz. monoplane, Mr. Lewis with his 5-oz. Almono, and Messrs. Morris, Norton, May, Osborne, and Cox have all been doing useful work, Mr. Norton securing his 3rd class certificate. The club have now got a workshop and committee room, where work can commence on Monday next. Will model accessory firms please send their lists to the Secretary?

St. Mary's Model Aero Club (Sec., H. W. A. JOHNSON, THE VICARAGE, KINGSTON, PORTSMOUTH).

HALF-YEARLY meeting held at "The Vicarage" on 10th. Officers re-elected for ensuing six months: Hon. Pres., Rev. P. I. B. Clayton; Hon. Sec., H. W. A. Johnson; Asstnt. Sec., C. Restall; Committee, Messrs. Eburne, Collett, Restall, Johnson, Clayton and Harper. Next business meeting to be held at "Vicarage," on 24th. The postponed members' competition was decided on Saturday last the 13th. Results: Novices—1st, B. Harper; 2nd, S. Robbins; 3rd, S. Webb. Distance—1st, E. Eburne (Burr-plane); 2nd, C. Restall (Trykle monoplane); 3rd, B. Harper (own design). Duration—1st, C. Restall (Trykle); 2nd, B. Harper; 3rd, E. Eburne. This competition was decided under the new French rules.

Monthly competition to-day (Sat.) at 2.30 at the North End Recreation Ground.

Scottish Ae.S. Model Aero Club (6, McLELLAN STREET, GOVAN).

ON Easter Monday members visited Barrhead Aerodrome. Little flying owing to the gale. On Saturday, at Great Western Boating Loch, Mr. C. Arthur had out his hydro-monoplane to test new position of float-planes. Several trials were made, but they were not so successful as those recorded in FLIGHT of a fortnight ago. Mr. Gordon's hydro No. 3 is now ready for trials, and contains many original points. A general meeting of members was held in the Institute on the 15th, particulars in next week's FLIGHT.

Flying meeting at Barrhead Aerodrome to-day, when a large turn out is requested.

Stony Stratford and District Kite and Model Aero Club (Hon. Sec., O. HAMILTON, JUN., OLD STRATFORD).

AT general meeting, April 11th, in clubroom, it was resolved to postpone the members' competitions, held over from April 6th, to May 4th. Next meeting, April 25th, usual time. Committee election, May 9th.

Windsor Model Flying (Sec., S. CAMM, 10, WALMA ROAD).

THE above club has been formed, and it is hoped that some good work will be accomplished during the summer as the club has unequalled facilities for experiments with rising-from-ground, and hydro-aeroplane models. Despite the gale last Saturday week, some good flying was done by S. Camm, E. A. Dowsett and F. Stanbrook. Flying to-day (Saturday) at 2.30 in Home Park.

Would firms kindly send catalogues?

Worcester Model Aero Club (Sec., S. A. SEARS, VICTORIA INSTITUTE, WORCESTER).

GOOD flights were obtained at our practise meeting on April 4th and 6th, several new models being experimented with on both days. The special competition on Easter Monday was hardly a success owing to high gusty wind. The best flight was made by Mr. Smith, 265 yards in 19 secs.

On Pitchcroft on April 11th every member was present. Messrs. Colton, Pollard, and Smith obtained flights of over 20 secs. duration. On Saturday, 13th, Mr. Colton's single-propeller model made some fine flights, hovering against a slight wind, and ending *en vol plané*. The machines present included two Mann-type models, two single-propeller tail-first models, and three tractor models.

Flying meetings on Pitchcroft to-day (Saturday), and also on the following Thursday at the usual times.

Yorkshire Ae.C. (Model Section) (5A, HULLAND ST., LEEDS).

GOOD flying in strong breeze on Saturday last at East End Park by Roberts, Whitaker, Beckett, and Holmes. Whitaker and Holmes out for altitude, rising from 50 to 80 ft. every time. Meet to-day in the park at 3.

CORRESPONDENCE.

*. The name and address of the writer (not necessarily for publication) MUST in all cases accompany letters intended for insertion, or containing queries.

Correspondents communicating with regard to letters which have appeared in FLIGHT, would much facilitate ready reference by quoting the number of each letter.

German Wright Patents.

[1529] Re the annulling of the main claim of the Wright patents by the German Patent Office, you state in your excellent Journal (April 6th, No. 171, page 305) that the *Automotor* was the only (English) paper* that considered it worth while at that time to record the early doings of practical workers in the field of flight.

A full report of the now famous paper read by Mr. Wilbur Wright before the Western Society of Engineers, Dayton, Ohio, was given in the March, June, September and January numbers of *Flying*, 1902-3, a beautifully-illustrated quarterly review of the progress then being made in the science of aeronautics by the pioneers of the "heavier-than-air" school of modern aviation, side by side with the triumphs of the dirigible aerostat of 10 years ago. As an early enthusiast I can recall with gratitude the pleasure with which I looked forward to each new issue of *Flying*.

Alexandra Park.

O. C. BOUFFLER.

[*We referred, of course, to the Press outside aeronautics.—ED.]

Position of Engine on Biplanes.

[1530] Most people agree to the dangerous position of the aviator in the earlier type of biplanes, that is sitting in front of the engine. But why cannot the positions be reversed? In the case of Gnome engines what is there to prevent them being hung over the front of the plane? The position of the pilot seated right at the back of the main plane would be very much safer. In the case of very heavy engines he could be on a small extended framework some distance from the rear edge of the plane, similar to the manner the pilot and passengers sit some distance ahead of the main plane in the latest type of Henry Farman machine. The position of the propeller would also do away with the fault of the tail dropping when the engine is stopped.

Heaton Moor.

H. A. BEDFORD.

Longitudinal Stability.

[1531] Many thanks to Mr. FitzGerald for explaining in [1521] his letter [1510]. I understand now how he argues that according to the value K in my article, Langley's tandem biplane has the greatest travel of c.p. for small angles of tilt of all machines. This type has not come into use, as the strength and consequent weight, of the fuselage would be prohibitive, and also I venture to suggest, because the front plane would materially affect the lifting efficiency of the back planes. Failing this, the next best type according to the formula, is the "tail-first."

Either I, or Mr. FitzGerald's demon, must apologise for a misquotation, but if we substitute α for β and β for α in my last letter, we have what I wish to show. Mr. FitzGerald mentions that inferences drawn for the conclusions of statical, applied to dynamical, mechanics, are apt to turn out unpractical. Quite so, but I venture to think that as the aeroplane is a rigid body its component parts are at rest relative to each other, and therefore the c.p. does travel with variations of the angle of attack, and consequently there is a righting couple, which is greater, as I endeavoured to prove in my article, in the "Canard" type machine.

O. D. ATKINSON.

The Government and Foreign Machines.

[1532] Your defence of the Government has certainly brought to light a few aspects of the case that the average reader has been apt to overlook in the past, but nothing that you said, I think, was more to the point than your argument in justification of the initial use of foreign-built machines for the purpose of gaining experience. It is really extraordinary how readily one can take a new thing for granted, and already most people are apt to take this game of flying as a matter of course, forgetting the human factor, and the environment of learning the art.

Undoubtedly, army pilots under training in the new corps will be expected to be up and away in the air at the word of command, without question of personal prejudices. It is all the more to be guarded against, therefore, that no lurking suspicions or lack of confidence should demoralise the spirit of the men who are to form the nucleus of our great new arm. Furthermore—and it seems to me this is the most important point—by a thorough familiarity with the originals, pilots will be able to make a fair and proper estimate of the qualities of the machines built at home. I for one have no doubt whatever that the British-built product will be superior, nevertheless it will be all the more gratifying to realise that their approval by the authorities is based on something more substantial than sentiment.

Where we do need sentiment at the present time, however, is in

the matter of a sufficient number of orders to the British firms who are constructing machines of well-recognised excellence and proved design. The British industry has had to fight for every moment of its existence, and it behoves the Government to remember that the nation would be in a far worse position than it is at present were the industry to peter out in the hour of its greatest need.

Hampstead.

H. L. BEATTY.

Blériot's Report.

[1533] As usual, you come to the fore with the real thing when any subject of consequence is on the tapis, and your publication of M. Blériot's report, followed by a series of views of those competent to criticise it, has proved the most interesting reading that I have digested for a long while. But it appears that our English engineers do not altogether agree with M. Blériot as to premisses. M. Blériot says that the machine tucks down its head for a dive, and lo! there are your top haubans broken. On the other hand some of your correspondents deny that the monoplane is capable of manoeuvring in this abrupt way, for lack of an adequate couple to turn it into the diving position in such a short space of time. As you yourself pointed out in a paragraph in FLIGHT, April 6th, it is the angular velocity that counts, that is to say the stress on the top wires only takes place while the force from above is changing the natural direction of the machine's trajectory.

The point on which opinions seem to split is whether it is within the power of the pilot to cause such a force to come into operation at all, or, at any rate, in such magnitude as would account for M. Blériot's conclusions and it seems to me that something in the nature of a definite investigation might with advantage be carried out if it were possible to do so with any degree of accuracy. Also, I think that it would be extremely interesting to hear what a few more practical pilots have to say on this side of the subject, because, if one may judge from the account of the flying at aerodromes, which forms a regular feature of your paper, the power of a skilled pilot in the air seems unlimited.

One thing at any rate is certain, that we cannot dispute the fundamental law of motion which gives a natural trajectory to a mass in horizontal motion, nor can we shut our eyes to the fact that a deviation of the path from that natural trajectory requires the application of an extraneous force, which force must be directed from above if the actual path slopes more acutely towards the ground. This is true, even if the object is a stone, still more so when it is an aeroplane possessed of wings that tend to prolong the natural trajectory. Owing to the effect of head resistance, which seems to have been overlooked in M. Blériot's report, it is difficult to draw a curve that is likely to define the natural trajectory of an aeroplane with any degree of accuracy. On the other hand the evidence of actual exploits in the air does certainly lead to the conclusion that the natural trajectory has been deviated from whatever it may be, consequently it is justifiable to suppose that certain evolutions in the air can be performed that will deprive the wings of positive loading and even subject them to a top pressure. In other words it is conceivable that an aeroplane may fly for an appreciable space of time (not necessarily exceeding a few seconds) by the sole support of its momentum counteracting gravity plus an additional top load on its wings, and it is on this assumption that M. Blériot undoubtedly bases his argument. Those who adversely criticise it appear to assume that the aeroplane must suddenly attain a very pronounced change of attitude for this condition of things to come about. Here, however, is a question that deserves further discussion.

Does it require such a very considerable change of attitude to relieve the wings suddenly of their positive loading? Having regard to the small normal angle of incidence of a machine in flight, it would at least seem reasonable to argue that an obliteration of this angle is within the power of the pilot to accomplish by the usual organs of control; the question is, therefore, can the pilot produce such a negative angle of incidence with respect to his natural trajectory in a sufficiently short space of time? Some of your correspondents have already answered in the negative, but I venture to think that further discussion might voice other opinions.

Newcastle.

M. HALL-SCOTT.

The Great French Balloon Race.

EIGHTEEN balloons left St. Cloud on Saturday, competing for the Prix Marius-Dubonnet, and, with the exception of the one piloted by Leloup, all have been accounted for. It is feared the last mentioned has been drowned as his balloon has been picked up in the sea. The winner was M. Georges Blanchet, who landed on Sunday midday at Montastruc, close by Lannemazan in the Hautes Pyrenees.

NEW ISSUE.

British Deperdussin Aeroplane Co., Ltd.—The prospectus is this week issued of this important Company, and it is to be hoped that adequate support will be given to the undertaking, which has been established to build in England the famous Deperdussin aeroplanes, which have greatly helped to make history in the Continental aviation world. One of the latest exploits to the credit of this machine is the rapid journey by air last Saturday from Paris to Eastchurch, when one of the Deperdussin pilots, M. Prevost, with Mr. Lawrence Santoni delivered, by way of the air to the order of the British Naval authorities, one of the latest machines. The capital of the company is £60,000, half of which is offered for public subscription in the present issue, being 30,000 of the 6 per cent. cumulative participating preference shares of £1 each. Special points as set out in the prospectus are, that the Company acquired the patents for the United Kingdom, and sole manufacturing rights for the British Empire, with all future developments of Mon. Deperdussin; (2) the established aeroplane business of the British Deperdussin Aeroplane Syndicate, at 30, Regent Street, including the fully equipped aviation school at Brooklands. The capital is also required for development of the business so as to be in a position to manufacture largely in England, to fill orders which the British Government contemplate giving to manufacturers in England. It is of importance that the War Office and Admiralty have already acquired Deperdussin machines for their use, and have approached the makers for the supply of several more, whilst, besides the French Government, other countries, including Italy, Russia, Belgium and Turkey, have also acquired a number of these machines. A number of world's records attach to the Deperdussin monoplanes, including speed altitude and passenger carrying. The Company's Aviation School at Brooklands is proving very successful, and has no less than five machines for training pupils. Monsieur M. Bechereau, the technical director of the Paris Deperdussin Works, and the designer of the Deperdussin monoplane will act as technical adviser to the Company, this being a very valuable asset for its success, whilst the directors comprise Admiral Sir Edmund Robert Fremantle, G.C.B. (Chairman), Col. Wykeham C. Dickenson and M. Armand Deperdussin in addition to the Joint Managing Directors, Lieut. J. C. Porte (late R.N.) and Mr. Lawrence Santoni.

Profits appear to be estimated upon a reasonably low basis and show a net balance of £8,600 available for further dividend after 6 per cent. has been paid both on the preference and ordinary shares.

The secretary and offices are H. E. R. Thompson, 30, Regent Street, S.W., and the Bankers the London County & Westminster Bank, Ltd., from any of whose branches prospectuses and application forms can be obtained. Elsewhere in this week's issue of FLIGHT the full prospectus appears.



Wireless on Aeroplanes.

THE more one thinks about the use of aeroplanes for military purposes and reconnaissance the more apparent does the importance of ascertaining the possibilities of successfully employing wireless for transmitting messages become. Various experiments have been made in a small way, but we are glad to hear that a Marconi company have decided to take up the subject with the utmost thoroughness and that, with the assistance of Mr. Howard Flanders, they are about to pursue their investigations at Brooklands. Already they have achieved a considerable measure of success elsewhere, but their research has not yet been brought to a point at which they feel justified in marketing a commercial equipment under the guarantee that they would naturally wish to sell with it. Now, however, that they are putting their shoulders to the wheel with a definite and expressed purpose of producing a wireless equipment for aeroplanes, it is only a question of time as to that same apparatus being available for purchase by all and sundry who may happen to have need of it.

Pekin-Paris Race for French Machines only.

FURTHER particulars have now been published by the *Matin* regarding the race which it is organising from Pekin to Paris, and which it is proposed shall be held during the coming August. It will only be open to French manufacturers, who may enter three machines, and each machine will have to carry two pilots. The route will follow the Trans-Siberian Railway from Pekin via Harbin, Irkutsk, Tomsk, Moscow, and Warsaw, then proceeding via Vienna, Trieste, Venice, Genoa, Marseilles, and Lyons to Paris. The first prize will be £4,000, the second £1,000, and three other prizes of £400 each; while, should no machine complete the course, £2,000 will be awarded to the first one to enter Europe. It is stated that the Borel and Hanriot firms have entered teams of three.

"Repair Shops and Stores Accounts."

SO many considerations has the present-day aeroplane builder constantly to keep before him in connection with his practical construction work, that it is sometimes to be feared his organisation suffers from a lack of attention to the bookkeeping part of the business. To keep an exact record of every "job" that goes through the shops, and to see that each job is charged up at an amount based on its actual cost, is an axiom, that must be respected if anything like order and system is to be maintained. And attention to this really important section of any business need not necessarily entail a great expense to the proprietor. It is not every aeroplane concern that can afford to have amongst its personnel a qualified accountant, or even a clerk, and it often rests with the proprietor himself or his chief mechanic to keep a record of the work carried out. They, it is quite likely, have little knowledge of bookkeeping, and it is then that a little book such as we have just read, entitled "Repair Shops and Stores Accounts," written by Messrs. George H. Mansfield and Walter A. Pearce, is of the utmost use. The book we mention outlines systems of job recording and charging, in such eminently simple language, and gives such typical examples of how this matter should be treated, that even an engineer not initiated in the keeping of books, should be able to institute quite an efficient system of record keeping. Not only to the small firm does this apply. It contains many hints and tips which may save pounds to the large firm. It is published at 1s. 9d., and can be obtained from the offices of the *Motor Trader*, 19-21, Wilson Street, Finsbury, E.C.



IMPORTS AND EXPORTS, 1911-12.

AEROPLANES, airships, balloons and parts thereof (not shown separately before 1910):—

	Imports.		Exports.		Re-Exportation.	
	1911.	1912.	1911.	1912.	1911.	1912.
January ...	£ 1,196	£ 619	£ 1,088	£ 2,412	Nil	Nil
February ...	3,129	3,110	1,786	36	Nil	Nil
March ...	11,327	640	1,027	950	357	600
	15,652	4,369	3,901	3,398	357	600



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British Deperdussin Aeroplane Co., Ltd.—Capital £60,000, in £1 shares (50,000 pref.). Acquiring the business carried on at 30, Regent Street, S.W., and at Brooklands, Weybridge, and elsewhere, by the British Deperdussin Aeroplane Synd., Ltd. Directors, Admiral Sir Edmund R. Fremantle, G.C.B., Col. W. C. Dickenson, A. Deperdussin, Lieut. J. C. Porte, and D. L. Santoni.

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